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ABSTRACT

The document, one in a series of seven reports from the Value of Children Project, discusses results of the survey in Taiwan. A sample of 216 young married couples with at least one child provided data for the survey. The volume is presented in six chapters. Chapters I and II discuss the value of children in Taiwan, the research methodology, and the sample. Chapter III discusses variables relating to the value of children: advantages, disadvantages, reasons for wanting and not wanting children, and economic benefits and costs. Chapter IV focuses on family size and family planning with reference to family size preferences, birth spacing, and birth control. Chapter V describes the value of children and fertility within the social context. The final chapter summarizes findings and makes policy recommendations. Results indicate that continuing the family name was the most important benefit, ranking above the emotional values of happiness and companionship. The most important disadvantage was the financial cost. Noise and disorder caused by children ranked second. A general recommendation is to design population policy by eliminating rewards and increasing costs of high fertility while permitting couples to act within a context of choice. Finding substitutes for personal growth and pleasure associated with children, weakening the value placed on having sons through changes in inheritance laws and religious practices, encouraging industrial modernization to reduce the need for parents to rely on their children for labor, and using television for educating the populace are specific recommendations. (KC)

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volume five

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the value of children

a cross-national study

taiwan

tsong-shien wu

with the assistance of
sandra e. ward

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preface

This project was carried out with the assistance of Professors Yih-Yuan Li and Kuo-Shu Yang, who served as consultants, and Misses Shiow-Yun Lin and Yei-Fei Su, research associates at National Taiwan University. While this report was being revised Messrs. Richard E. Barrett and Kun-San Shiao gave helpful suggestions and also helped in proofreading the manuscript. Of course, the author is responsible for the views contained herein.

The first phase of the Value of Children Study, with which this volume is concerned, was initiated and coordinated by Dr. James T. Fawcett, formerly assistant director for graduate study at the East-West Population Institute, now senior representative for East and Southeast Asia, the Population Council, in Singapore. Coinvestigators were Drs. Fred Arnold, research associate, East-West Population Institute; Rodolfo A. Bulatao, assistant professor of sociology, University of the Philippines; Chalio Buripakdi, formerly researcher and planner at the Ministry of Education, Thailand, and currently director of the doctoral program in development education, Srinakharinwirot University, Thailand; Betty Jamie Chung, formerly a fellow at the East-West Population Institute, now on the staff of the Community Relations Department of the Independent Commission Against Corruption, Hong Kong; Toshio Iritani, professor of social psychology, Tokai University, Japan; Sung Jin Lee, director of the Korean Institute for Research in the Behavioral Sciences and associate professor of psychology, Seoul National University, Republic of Korea; and the author. Although fieldwork was carried out independently in each country, decisions regarding the

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study's design and analysis were made jointly from the inception of the project.

Besides those already mentioned, I wish to extend my appreciation to Ms. Sandra Ward and Ms. Sonia Albores, publications officer and research assistant at the East-West Population Institute, respectively, for their assistance in bringing this volume to press. I particularly want to express my appreciation to Ms. Ward for her patient assistance in revising my report. Without her efforts and Dr. Fawcett's valuable comments, this volume might not have achieved its present standard. I would also like to extend my heartfelt thanks to Dr. George P. Cernada, Population Council representative in Taiwan, for his encouragement and useful comments.

Finally, I wish to thank the Ford Foundation and the East-West Population Institute, the former for providing funds for the Taiwan portion of the study, the latter for providing technical support and facilities.

1

introduction

Examining the development of any science, one may be puzzled by a tendency that knowledge directly related to daily life is less advanced than knowledge not having direct implications for daily life. One reason may be that people tend to ignore familiar phenomena that are easily observed and to regard them as less mysterious or less suitable for scientific investigation than unfamiliar phenomena. Another reason may be that practical problems like the study of human fertility require forms of investigation that transcend traditional scientific boundaries.

Although the problem of rapid population growth and its effects on social and economic welfare have received increasing attention from scholars, government planners, and the public during the past several decades, it is only very recently that behavioral scientists have joined in interdisciplinary efforts to solve the problem of rapid population growth by inquiring into the reasons why people have children. Economic cost-benefit theory as applied to couples' childbearing decisions is well developed (see, for example, Robinson and Horlacher, 1971), but relatively few studies have attempted to test the theory empirically and in different cultural settings. Moreover, because many of the costs and benefits of children cannot be measured in a narrowly economic sense, empirical testing calls for an interdisciplinary approach in which sociocultural and psychological, as well as economic, values associated with children are examined.

The Value of Children Study was designed to explore parents' perceptions of the satisfactions and costs of children in a variety of cul-

tural and economic settings, on the assumption that the valuation placed on children is a major determinant of fertility. To achieve this objective, an exploratory survey was conducted by a group of behavioral scientists in six countries: the Republic of China (Taiwan), Japan, the Republic of Korea, the Philippines, Thailand, and the United States (Hawaii). Coordination of the research was provided by the East-West Population Institute. Volume 1 of this series (Arnold et al., 1975) describes the background and organization of the study in greater detail and presents findings from the six countries in a comparative format. The present volume is concerned with results of the Value of Children (VOC) survey conducted in Taiwan during late 1972 and early 1973.

The VOC investigators worked closely on all stages of the project, from designing the survey questionnaire to analyzing the data and writing up the findings. Preparations for the study began at a workshop convened in Honolulu in April 1972. Two major decisions that had to be made at the outset concerned the sample groups to be interviewed and the variables to be used in measuring the considerable range of values associated with children in different cultural settings. To ensure cross-national comparability, efforts were made to draw samples from roughly the same socioeconomic strata in each country, to delimit the demographic characteristics of those sampled, and to design a questionnaire containing items that would be meaningful to respondents in each country. One purpose of the study was to compare rural and urban couples, because all six countries are experiencing urbanization and urban couples are generally thought to have more "modern" attitudes toward fertility than rural couples. Another was to compare attitudes of husbands and wives, since both are involved in childbearing decisions and their attitudes might differ in relation to sex roles. Once the characteristics of the subsamples were agreed upon, it was up to each investigator to establish appropriate sampling procedures. Roughly equal numbers of respondents were sought from each of the three socioeconomic groups chosen: urban middle-class, urban lower-class, and rural. The study did not attempt to obtain samples characteristic of the countries' populations as a whole; thus any comparisons made between cultures would have to be restricted to comparisons of the subgroups within those cultures.

Although the study focused on social and psychological values of children, it also explored economic values and variables related to family size and family planning. Once all the variables to be studied were identified, the investigators developed questionnaire items that could

be used in all six countries. The questionnaire was field-tested and revised during the planning stage of the study. Each investigator was free to add items to the core questionnaire for the purpose of investigating values of particular interest to him.

The core questionnaire consisted of open-ended and structured items. (It is reproduced as Appendix A in Arnold et al., 1975.) Since comparability of results across the six countries was a major objective of the study, the investigators devised a common coding scheme for analyzing data obtained from the core items. This was done at a workshop held in Hong Kong in February 1973, after the fieldwork had been completed. The data from each country were then coded and keypunched on IBM cards and sent to the East-West Population Institute for processing by means of standardized computer programs. Subsequently, the processed data were transmitted to each investigator for analysis.

The value of children in Taiwan

Taiwan's population has increased dramatically since the end of World War II, when large numbers of Chinese migrated from the mainland to Taiwan. Most of the growth in recent years has been due to natural increase, caused by a substantial decline in death rates combined with a much more modest decline in birth rates. By 1972 the population had reached approximately 15.1 million and had a rate of natural increase of 1.9 percent a year. If that rate were to continue, the population would double in 36 years, producing an average density of 842 persons per square kilometer (Nortman, 1973: table 4).

Two factors in particular are associated with the high birth rate in Taiwan. First, children born during the baby boom of the early 1950s are now entering the childbearing age groups, so that reductions in average family size are offset by a growing number of couples. Second, according to survey reports of the Taiwan Family Planning Program, a large number of married women still want to have at least two sons. Son preference is by far the most important cause of continued high fertility and is deeply rooted in Chinese culture. At any given parity, couples with sons are more likely to practice contraception than couples with daughters, who are more likely to continue childbearing (Freedman and Coombs, 1974).

Several island-wide knowledge, attitude, and practice (KAP) surveys have been conducted by the Taiwan Family Planning Research Institute to evaluate the progress of the national program, but little attention has been given to values, economic and noneconomic, that parents

in Taiwan associate with children. The need for research on this topic has recently been recognized by behavioral scientists at National Taiwan University and by family planning officials in Taiwan.

The Value of Children Study in Taiwan followed the research design outlined in the previous section. Its purpose was to gain insight into the benefits and costs of children as perceived by young Taiwanese parents and to probe the relationships among those perceptions, socio-demographic and socio-psychological characteristics of the respondents, and the respondents' fertility behavior and attitudes. The study was administered by the author with the assistance of two professors of anthropology and psychology, who served as consultants, and two graduate research associates of extension education at National Taiwan University.

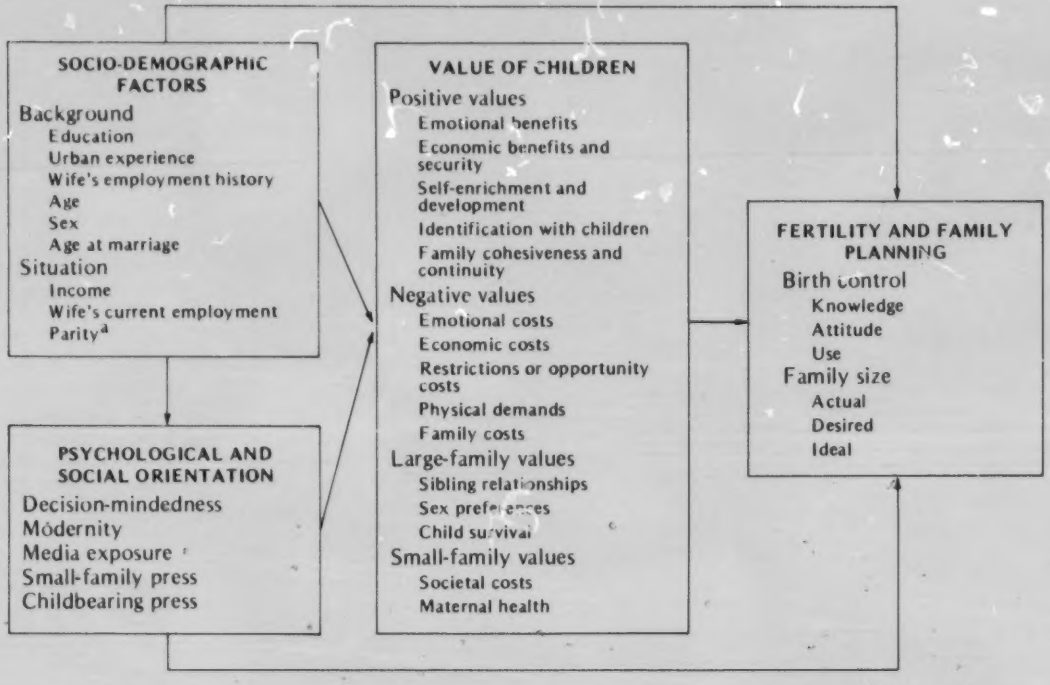
The core questionnaire was translated into the Taiwanese dialect of Mandarin and independently back-translated to ensure conceptual equivalence between the English and Chinese versions. Several country-specific items were added to the Taiwan questionnaire.

A sample of 216 couples was drawn from three socioeconomic strata: 72 each from the urban middle class, urban lower class, and rural areas. All couples had at least one child, but the respondents were relatively young, their ages ranging between 20 and 34 for the women and between 20 and 44 for the men. The survey took place in two precincts of Taipei City in December 1972 and in two rural prefectures of Taiwan in February 1973.

The conceptual model

The conceptual framework of the Value of Children Study was influenced by a scheme developed by Lois Wladis Hoffman and Martin L. Hoffman (1973), in which children are seen as satisfying various psychological needs of parents. Each value ascribed to children by a real or prospective parent is likewise assumed to fulfill a psychological need. The present study assumes that psychological values are only one dimension of the value of children to parents. Other values relate to perceived kin-group and societal needs and to economic motives. Moreover, values associated with children may be positive or negative, attached to children of a particular sex, and affected by one's family-size preferences. The value of children is thus viewed as a dynamic variable that is influenced by one's cultural and personal experiences and in turn influences one's childbearing decisions (see Figure 1.1). Among the determinants of the value of children and fertility behavior are such socio-demographic factors as age, sex, education, income, ur-

Figure 1.1 Conceptual model for the Value of Children Study



a. Parity may be considered a situational variable or a family-size variable, but not both at the same time.

ban experience, and current parity. Also influencing the value of children and fertility are a person's psychological and social orientation—how "modern" or "traditional" he is, what sorts of normative pressures have been brought to bear on him, and whether he tends to make independent judgments or be easily influenced by others.

The classification scheme set forth in Figure 1.1 is based on data from all six VOC countries and is discussed in more detail in Arnold et al. (1975). It is not intended to be a complete model of childbearing behavior but rather to indicate possibly fruitful areas of research on fertility decision-making.

Values of children, shown as the intervening block of variables in Figure 1.1, are the major focus of the present analysis. In Figure 1.2, the classification of value-of-children variables has been modified to show a matrix of childbearing values relevant for Taiwan. The matrix consists of two dimensions—direction of the value system, and utility or goal orientation. Direction is divided into positive and negative values, utility into intrinsic and extrinsic values. Positive and negative values are those that functionally motivate people to have or not have children. The term *intrinsic* relates to the value placed on children in and of themselves—that is, as an end, not as a means or obstacle to some other benefit. It also includes costs directly related to childrearing. *Extrinsic* value, on the other hand, relates to children viewed as a means or an obstacle to other, usually utilitarian, goals. Intrinsic, positive values, then, are benefits to parents that are inherent in the qualities of children and the parent-child relationship, where children themselves are a desired goal. Extrinsic, positive values are benefits to parents based on what children represent or what they do, where children are a means to another goal. Intrinsic, negative values are costs to parents that are inherent in the qualities of children during the course of childrearing, where children themselves are the source of stress; and extrinsic, negative values are costs to parents caused by children's interference with the attainment of other goals or sources of gratification, but not by the children themselves.

Thus motives for having children are assumed to be primarily conscious and purposive. It is apparent that only if most fertility behavior is deliberate can governmental efforts to reduce population growth have any expectation of success. Intrinsic positive values associated with children are more difficult to change than extrinsic ones, because having children itself is the goal and a substitute for that goal has not yet been found. For the extrinsically oriented parent, having children is just one means toward goals other than children, and thus it is pos-

Figure 1.2 Dimensions of the value of children in Taiwan

	Positive values	Negative values
Intrinsic values	Happiness, love, companionship Personal development of parent	Emotional costs Physical demands on parents
Extrinsic values	Economic benefits, security Continuity of family name Identification with children's accomplishments	Financial costs Restrictions on alternative activities

sible, though not easy, to find substitutes for them. As the Taiwan data reveal, however, intrinsic and extrinsic values are both usually operative in varying degrees.

Happiness, love, and companionship were the most prominent positive intrinsic values attached to children by Taiwan respondents, whereas emotional strain and physical demands associated with children were major negative intrinsic values. Extrinsic values of greatest relevance were continuity of one's self and family name and economic benefits (positive), and the economic and opportunity costs of children (negative). Among the positive values, the lower socioeconomic groups tended to emphasize the extrinsic dimensions—that is, to view children as a means to another end. This observation does not seem to hold for the negative values, however. Intrinsic costs affected all parents, although the components differed with socioeconomic status and setting: higher-status and urban respondents emphasized emotional costs, whereas rural respondents emphasized physical demands of children. Extrinsic costs also affected all parents, although again there were different emphases. Financial costs were of greater importance to the lower socioeconomic groups and, for those same groups, restrictions on work tended to outweigh the loss of freedom and restrictions

on time. The matrix presents only broad clusters of values and cannot do justice to the range of values expressed by respondents, the weights assigned to them, or the many qualifications indicated by different measures used in the VOC survey.

The remainder of this volume, therefore, will be devoted to a detailed discussion of the study and its findings. Chapter 2 describes the research methodology. Chapter 3, the heart of the report, assesses the dimensions of values of children for the Taiwan sample. Chapter 4 presents a profile of the sample's family-size and family planning attitudes, and Chapter 5 analyzes the relationships among the socio-demographic, socio-psychological, value-of-children, and fertility variables studied. Finally, in Chapter 6, the findings are summarized, policy implications discussed, and some recommendations offered.

2

sample and methodology

Because the Value of Children Study was to be carried out in six countries, the research instrument had to be applicable to a variety of cultures. Within each of the countries social, economic, religious, and ethnic differences existed among major elements of the population. To design a survey that would measure significant similarities and differences among the groups interviewed but would not become so complex as to defy analysis and interpretation required selectivity in the scope of the questionnaire, the characteristics of the samples, and the kinds of analysis used. The study was exploratory. Time was one constraint: interviews could not take longer to complete than respondents were willing to spend. Funds and staff were another. With these considerations in mind, the coinvestigators decided to limit the VOC questionnaire to the investigation of key variables and the samples to three groups representing different stages of socioeconomic transformation. On the other hand, the coinvestigators thought it important to include both men and women in the samples, to test the assumption that there are attitudinal differences between the sexes concerning family formation. Because couples with children were of greatest interest to the investigation, only parents were interviewed.

The sample

In Taiwan the two urban samples were drawn from two precincts in Taipei Municipality; the rural sample was selected from Yunlin and Chiayi Prefectures, which are predominantly agricultural (Figure 2.1). *Lis*, or subdivisions consisting of 10 to 20 neighborhoods, were used

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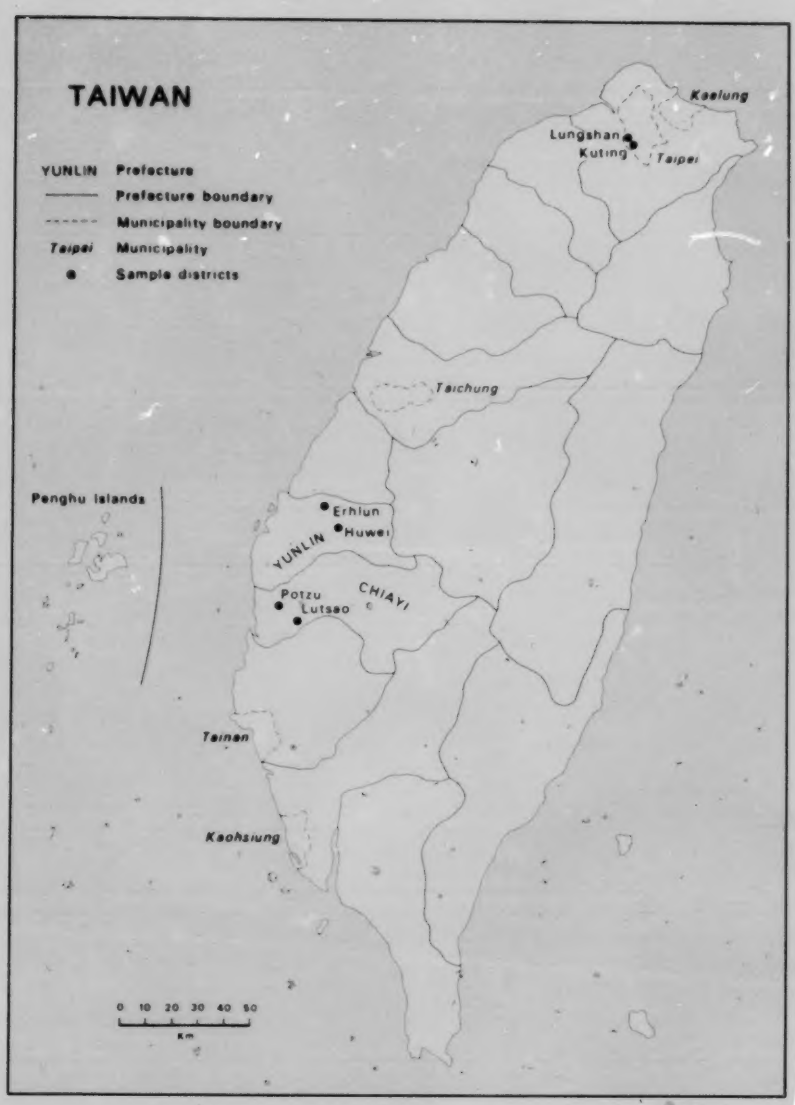
Figure 2.1 Socioeconomic groups surveyed, by sample district: Taiwan



as the primary sampling unit for the survey.[1] For the urban samples, selection criteria included educational attainment, in addition to occupational and demographic characteristics.

Kuting, a large middle-class precinct located in the southern part of Taipei City, was selected for the urban middle-class sample. It is characterized by office buildings and residential areas. Lungshan Precinct, in the southwest, was chosen for the urban lower-class sample. It is one of Taiwan's oldest urban districts, and contains many small businesses. Its inhabitants are mainly traditional, native Taiwanese, the majority of whom are engaged in sales and labor. According to the 1971 household registration, the average number of persons per household in Lungshan was 5.2, compared with 4.5 in Kuting.

Twenty-four neighborhoods from Kuting and 24 from Lungshan were randomly selected to assure even distribution of the samples. Precinct population registers containing demographic and socioeconomic data about the inhabitants were used to draw stratified random samples of three couples from each neighborhood, the selection criteria being: (1) all couples had at least one child; (2) wives were between 20 and 34 years of age, with one wife in the age cohort of 20–24, another in the cohort 25–29, and the third in the 30–34 cohort; (3) husbands were between 20 and 44 years of age; and (4) middle-class husbands (from Kuting) had completed high school and were engaged in white-collar occupations, whereas lower-class husbands (from Lungshan) had at most a grade-school education and worked in blue-collar jobs. Thus in each urban precinct 24 couples from each of the three age cohorts were selected, making a total of 72 middle-class couples from Kuting and 72 lower-class couples from Lungshan, or 288 respondents. To obtain these samples it was necessary to select about twice as many couples from the registers as were actually needed to fill the quotas.

For the rural sample, two townships from each of the two rural prefectures were selected—one with slightly over half of the population engaged in farming, the other having at least 85 percent of the population in agriculture. Altogether, 72 couples from the four townships

1 The Taiwan administrative area includes Taiwan Province, which had a 1971 midyear population of 13 million, and Taipei Municipality, comprising 16 precincts having a combined population of 1.8 million. Taiwan Province is divided into four provincial cities and 16 prefectures. The cities are subdivided into districts; the prefectures are subdivided into 345 small cities, urban townships, and rural townships. Within the 345 subdivisions are 6,527 villages (in the rural townships) and *lis* (in the small cities and urban townships). Altogether there are 92,956 *lins*, or hamlets, within the 345 subdivisions of Taiwan Province. In Taipei Municipality, there are 608 *lis* consisting of 10,644 *lins*.

were selected. The townships' population registers were used to identify farming couples of the proper ages; records from township farmers' associations were also used to verify that couples selected were farmers. One village consisting almost entirely of rice-growing families was deliberately chosen to obtain 18 eligible couples.

Table 2.1 presents selected demographic and socioeconomic characteristics of the respondents. Owing to the eligibility criteria, the sample was young, 30 years of age on the average. Husbands were slightly older than wives and had completed more years of schooling, spent a greater proportion of their lives in urban areas, and married somewhat later than the wives. Average educational attainment was 12 years for the urban middle-class group, compared with six years for the urban lower-class group and under five years for the rural respondents. Respondents in urban areas had lived there for two-thirds of their lives on the average, whereas rural respondents had spent almost all of their lives in a rural setting. Age at marriage was highest for the middle-class group (24 years), lowest for the rural group (21 years). This difference may have affected parity to some extent, for middle-class respondents had an average of 2.2 children, compared with an average of three children among the lower-class and rural respondents. Income differences among the socioeconomic subgroups were even more striking: the average middle-class family earned the equivalent of US$1,964

Table 2.1 Selected characteristics of respondents

Characteristic	Urban middle	Urban lower	Rural	Female	Male	All respondents
Mean age	30.2	30.3	28.8	28.7	31.0	29.8
Years of education	12.2	6.0	4.7	6.3	9.0	7.6
Percentage of life spent in urban areas	68.2	67.9	1.0	42.7	48.6	45.7
Mean age at marriage	24.3	22.7	20.7	20.9	24.3	22.6
Mean number of living children	2.2	2.9	2.8	na	na	2.6
Mean annual family income in New Taiwan Dollars[a]	75,521	44,160	24,923	na	na	48,201
Percentage of women currently employed	19.4	16.7	13.2	32.9	na	16.4

na—not applicable.

a One New Taiwan Dollar = US$0.026.

per annum, or nearly twice that of the lower-class family and more than three times that of the rural family. In urban families about 20 percent of the wives were currently employed outside the home, compared with 13 percent of the rural wives.

The questionnaire

The questionnaire developed for the VOC Study contained 164 core questions plus some country-specific items added by each investigator. The questions elicited demographic and socioeconomic information about the respondents; their general psychological attitudes; positive and negative values they associated with children; their knowledge, attitudes, and practices concerning birth control; and their reproductive histories. Open-ended questions were combined with structured items to probe attitudes and values more deeply than is possible with a wholly structured format. Most of the open-ended questions were posed early in the interview so that respondents' answers would not be influenced by the structured items. Although the questionnaire was long, no respondent was asked every question. The English version of the core questionnaire is reproduced as Appendix A in Arnold et al. (1975).

The VOC questionnaire used in Taiwan included the following country-specific items, a translation of which appears in the Appendix:

1. A religiosity scale consisting of 12 items covering practices and beliefs, considered to be valid for all religious groups in Taiwan.
2. A set of questions to determine socioeconomic status of the rural sample, including land holdings, crop and livestock production, farm income, and other forms of income.
3. A list of 15 consumer durables, for both urban and rural respondents, and a list of five pieces of farm equipment, for rural respondents, to ascertain level of modernity. Ownership of the durables and equipment was taken to indicate modernity.
4. Questions about the birth dates of respondents and their children according to the Chinese calendar's animal year of birth.

After the author and two research associates translated the core questionnaire into Mandarin from English, two local social scientists independently back-translated it to check the validity of the translation. Since the dialect spoken by the Taiwanese respondents differs in some respects from Mandarin, a special effort was made to translate the core questions as colloquially as possible. The country-specific questions of course did not have to be translated.

Fieldwork and data processing

Twenty-eight interviewers, all fourth-year students in anthropology, psychology, sociology, and agricultural extension at National Taiwan University, were recruited for the fieldwork. Nine female and two male students from the Department of Agricultural Extension interviewed the rural respondents. For the urban samples eight female and nine male students were chosen from the other university departments. Before the fieldwork began, the interviewers and their research assistants completed a seven-day intensive training program that included one day of field practice. Besides general interviewing techniques, the program stressed practice in the dialects used by respondents to facilitate rapport and ensure a high degree of interview reliability.

In the rural areas, extension agents of the farmers' associations and other local leaders assisted the fieldwork by introducing interviewers to respondents. The Taipei Family Planning Commission made some suggestions for facilitating the fieldwork in the urban areas.

The interviews took place between December 1972 and February 1973. Whenever possible, husbands and wives were interviewed simultaneously in different rooms to prevent one spouse from influencing the other. A male interviewer usually interviewed the husband in the living room while a female interviewer met with the wife in the kitchen. In this way the wife was able to continue doing her household chores. Sometimes a third interviewer was present to chat with the husband's mother and keep her from influencing the daughter-in-law's responses. Interviewers were instructed to bring candy to respondents' homes for the purpose of diverting children while mothers were interviewed. When it was not possible to interview husband and wife at the same time, the spouse interviewed first was asked not to discuss the interview with the other spouse until both had been interviewed.

The response rate was high. Interviewers experienced frequent interruptions during only 3 percent of the interviews, and only 1 percent of the respondents was uncooperative. In general, rural and urban middle-class respondents displayed a higher degree of cooperation than urban lower-class respondents. Average interview length was 73 minutes, ranging between 61 minutes for the urban middle class and 82 minutes for the urban lower class. Most respondents were surprised at the beginning of the interview to be asked questions about the value of children, but they seemed to take an interest in the subject of the study. Some respondents lacked verbal fluency and may not have expressed their ideas as clearly as others. Moreover, in replying to open-ended questions, respondents used different words to express similar

ideas and values. Through role playing, interviewers were trained to recognize these differences and take them into account when coding the responses.

The interviewers wrote all responses on the questionnaires as they conducted the interviews. Sometimes they took additional notes to be used later as aids in interpreting respondents' answers. Responses were checked by the interviewers themselves immediately after the interviews were completed and rechecked by the field supervisor in the evening when all the interviewers met together. A modified form of the coding scheme developed for all six countries participating in the VOC survey was used in Taiwan. In a few cases it was necessary to reinterview respondents in order to obtain clarification or fill in missing answers. The reinterviews took place on the day following the initial interviews.

Responses were coded and keypunched at the Computer Center of National Taiwan University between February and April 1973. Keypunched cards were forwarded to the East-West Population Institute for computer analysis by means of the Statistical Package for the Social Sciences (SPSS). One of the research associates from Taiwan worked at the Institute during April 1973, handling the first-stage processing of the data. The author spent July and August 1973 in Honolulu under the auspices of the Institute, working on a preliminary report of the Taiwan results.

3

dimensions of the value of children

A major purpose of this phase of the Value of Children Study was to begin exploring different dimensions of the value of children, not only the values associated with children in the abstract, but also values attached to particular children (usually the respondents' own) and in specific contexts. For this purpose a combination of survey items was used, ranging from open-ended questions enabling respondents to describe their values in their own words, to multiple-choice items and Likert-type attitude items, some of which probed values not easily verbalized by the respondents. Some apparent redundancy was inevitable with this approach, but the results have given the researchers confidence that responses were not simply artifacts of the way questions were phrased. Moreover, an effort was made to arrange the questionnaire items in a sequence that emphasized their differences, rather than their similarities.

The present chapter presents our findings concerning the values and disvalues ascribed to children by respondents in Taiwan. Because most of the VOC questionnaire focuses on this topic, the chapter represents the core of the volume. The discussion deals with each questionnaire item in turn, pointing out characteristics of the sample as a whole and of the various subgroups.

Special attention was given to the coding of responses to open-ended questions. The common coding scheme developed from aggregated data collected in all six VOC countries (see Exhibit 4.1 in Arnold et al.,

1975) was modified in Taiwan to include only those response categories reflecting values described by the Taiwan respondents. Thus the scheme contains 39 specific advantages of children, which are subsumed under nine major advantage categories, and 22 specific disadvantages organized under eight major disadvantage categories (Exhibit 3.1). Positive values of children that were not mentioned by the respondents, and hence not coded in the Taiwan scheme, included children as a proof of masculinity or femininity, pleasure from children's growth and development, enhancement of the family's reputation, satisfying the desire for grandchildren, having someone to inherit the family wealth, having children to perform religious rituals and ancestor worship, and having children to satisfy the desires of the spouse. Negative values omitted from the Taiwan scheme were general marital problems, problems affecting the kin group, and societal costs such as overpopulation.

Although these values exist in Taiwan, they were either not salient to respondents or were expressed in such a way as to be coded in other categories. For example, because a young wife proves her femininity by having children, there is considerable social pressure on her to bear a child early in marriage. But the motivation is expressed as a desire to continue the family name. The assumption that maternity is a natural function of women is so strong that, in many traditional families, if a wife does not produce a child within a few years after her marriage she may feel obliged to permit her husband to take a second wife, even though it is illegal for him to do so. Reproductive failure is usually attributed to the wife, and therefore men do not feel a corresponding need to prove their masculinity.

Similarly, the values elsewhere coded as pleasure from children's growth, desire for grandchildren, and satisfying desires of the spouse were coded in Taiwan under such categories as happiness for individual parent, continuity of family name, and children as a bond between spouses because of the way in which respondents verbalized them. A single code category may thus stand for a number of related values, differences among which were not articulated by respondents. Though most respondents spoke simply of continuing the family name, this traditional Chinese value has a variety of meanings—from perpetuating the male bloodline, to bearing (or adopting) children to inherit the family property and perform ancestor worship.

Advantages of having children

Respondents were first asked to name as many advantages of having

Exhibit 3.1 Advantages and disadvantages of having children: major code categories and specific code categories used in the content analysis of open-ended responses

ADVANTAGES

Happiness, love, companionship

Companionship, avoidance of loneliness
Love, affection
Play, fun with children; avoidance of boredom
Relief from strain, distraction from problems
Happiness for individual parent (general)
Happiness for family
Uniqueness, specialness in parent-child relationship

Personal development of parent

Character development, responsibility, maturity, morality
Incentives to succeed, striving to provide for children
Fulfillment of self, completeness as person
Extension of self
Learning from experience of childrearing
Motherhood, fatherhood; adulthood

Childrearing satisfactions

Pride in children's accomplishments
Children to carry out parent's hopes, aspirations
Opportunity to teach, guide, instill values
Satisfaction in one's childrearing ability, accomplishments
Satisfaction in providing for children

Economic benefits, security

Economic help in old age
Companionship, comfort, care in old age
Unspecified help in old age
Economic help (old age not mentioned)
Comfort, care (old age not mentioned)
Help in housework, family chores; practical help
Help in family business, farm
Help in taking care of other children
Unspecified help (old age not mentioned)

Benefits to family unit

Children as bond between spouses
Children as family life; complete, closeknit family

Kin group benefits

Continuity of family name
To increase strength, power of kin group
To satisfy desires of other kin

Exhibit 3.1 *(continued)*

ADVANTAGES *(continued)*

Social, religious influences

Conformity to social norms
Children as benefits to society

General, intrinsic value of children

Children as treasure, wealth, assets
Instinctive, natural to have children
General wanting, liking children

Other advantages

DISADVANTAGES

Financial costs

Educational costs
General financial costs

Emotional costs

Responsibility of parenthood
Discipline, moral behavior
Health problems of children
Concern over children's future success, happiness
Concern about satisfying children's present wants
Noise, disorder, nuisance
General rearing problems
General emotional strain

Physical demands on parents

Health hazard of pregnancy; maternal health
Physical work, tiredness caused by children

Restrictions on alternative activities

Restrictions on time
Restrictions on travel
Restrictions on social life, recreation
Restrictions on job, career
Restrictions on personal wants
Restrictions on privacy
General lack of flexibility, freedom

Marital problems

Less time, interaction between spouses
Disagreements over children

Other disadvantages

children as they could think of in comparison with having no children. With nondirective encouragement, most respondents were able to mention several advantages. The most frequently mentioned advantages are presented in Table 3.1. For the sample as a whole and for most subgroups, the play and fun that parents can have with children was the most salient advantage; some respondents expressed this value conversely, saying that children prevent boredom. Nearly half (43 percent) of the sample cited this advantage, with the proportion of subgroups mentioning it ranging from 52 percent (urban lower class) to 32 percent (rural group). Women mentioned it slightly more frequently than men.

It is understandable that urban people would look on children as a release from their daily tensions. In a rural setting, however, adults not only live and play with their children, but also work with them. Moreover, the rural family is usually an extended family; a larger number of family members may mean that parents have few occasions to play alone with their children. These differences in family structure and lifestyle would account for the difference in response frequency for this value.

Approximately one-third of the sample mentioned continuity of family name as an advantage of having children. In this case there was greater variation across subgroups, with nearly twice as many lower-class as middle-class respondents mentioning it (44 and 19 percent, respectively) and more than twice as many men as women citing this advantage (41 and 23 percent). According to Chinese custom, only boys can continue a family name and lineage, for girls take their husbands' names when they marry. Thus this value applies to sons specifically, rather than to children in general. It is not surprising, therefore, that men mentioned this advantage more frequently than women, since it was their names that would be perpetuated.

One-fourth of all respondents mentioned the companionship children provide to others and, conversely, the value of children as a means of avoiding loneliness. Urban respondents, particularly the lower-class group, mentioned this advantage more frequently than did rural respondents, probably for the same reason that play and fun with children were more salient to them. That more women than men mentioned this advantage as well is a reflection of family life in Taiwan. Women have primary responsibility for childrearing and fewer opportunities than men for employment outside the home; they are therefore more dependent on their children for companionship than are men, who have more social contacts outside the home.

Table 3.1 Most frequently mentioned advantages of having children
(Percentage of respondents who mentioned specific advantages, by subgroup)

Advantage	Urban middle	Urban lower	Rural	Female	Male	All respondents
Play, fun with children; avoidance of boredom	44	52	32	45	41	43
Continuity of family name	19	44	33	23	41	32
Companionship, avoidance of loneliness	22	38	15	35	15	25
Unspecified help in old age	4	24	39	22	22	22
Happiness for individual parent (general)	13	10	9	7	14	11
Pride in children's accomplishments	7	6	16	8	11	10
Love, affection	10	14	4	7	11	9
Happiness for family	13	4	3	6	8	7
Children as family life, complete or close-knit family	11	3	4	4	8	6
Relief from strain, distraction from problems	8	7	1	7	4	5

The fourth most frequently mentioned advantage of children was help in old age, cited by nearly a quarter of all respondents. In this case, however, the advantage was highly salient to the rural group, somewhat less so to the urban lower-class group, and not at all salient to middle-class respondents. (There was no difference in response rates between men and women.) The middle-class group was least likely to need financial help from their children in old age because they were better protected by savings, investments, and pension plans. The rural group, on the other hand, was most likely to depend on family members for economic security even while the parents could still work, and probably expected their children to take over the family enterprise when the parents reached old age.

Smaller percentages of respondents mentioned such advantages as happiness for the individual parent, the pride one can take in children's accomplishments, the love and affection of children, and other familial and psychological values. The middle-class group and men mentioned

most of these advantages more often than did the other subgroups. Pride in children's accomplishments, however, was mentioned by more than twice as many rural respondents (16 percent) as urban respondents. Among rural families in Taiwan, migration of sons to urban areas has become a common avenue to upward mobility. The salience that rural respondents placed on pride in their children may thus be a reflection of a transformation of lifestyle among rural inhabitants.

The percentage of respondents who mentioned at least one advantage of children coded under each of the major code categories is presented in Table 3.2. By far the most salient general advantage was happiness, love, and companionship, mentioned by nearly half of all respondents and by the largest proportion of respondents in each subgroup. Kin group benefits and economic benefits were also fairly salient, with 18 and 16 percent of all respondents mentioning them, respectively. Other advantages were mentioned by much smaller percentages of the total sample.

Table 3.2 General advantages of having children
(Percentage of respondents who mentioned at least one advantage coded under each of specified major code categories, by subgroup)

Major code category	Urban middle	Urban lower	Rural	Female	Male	All respondents
Happiness, love, companionship	58	54	34	54	45	49
Kin group benefits	12	21	20	14	21	18
Economic benefits, security	5	15	30	17	16	16
Childrearing satisfactions	6	3	10	6	6	6
Benefits to family unit	10	1	3	4	5	5
Personal development of parent	6	1	1	2	4	3
General, intrinsic value of children	1	3	2	3	3	3
Social, religious influences	1	1	2	2	1	2
Other advantages	0	1	*	*	*	*
Total number of responses	286	343	284	438	475	913
Mean number of responses	2.0	2.4	2.0	2.0	2.2	2.1

* Less than 1 percent.

The three most salient general advantages of having children—happiness, love, companionship; kin group benefits; and economic benefits—coincide with the ancient Chinese values of happiness, long life, and prosperity. These traditional values appear to be weakening among the younger generation in Taiwan but are still held by the society as a whole.

The two urban groups and women mentioned happiness, love, and companionship more frequently than did rural respondents and men. Kin group benefits were most salient to men and the urban lower-class and rural groups, whereas economic benefits and security were more salient to rural than to other respondents.

After naming all the advantages of having children that they could think of, respondents were asked to rank them in order of importance. Their responses indicate that value salience (frequency of mention) and importance do not necessarily coincide (Table 3.3). Whereas the psychological values of play and fun with children/avoidance of bore-

Table 3.3 Most important advantages of having children
(Percentage of respondents who ranked specific advantages first in importance, by subgroup)

Advantage	Urban middle	Urban lower	Rural	Female	Male	All respondents
Continuity of family name	10	39	24	16	33	25
Play, fun with children; avoidance of boredom	22	15	7	21	8	15
Unspecified help in old age	1	7	26	14	8	11
Companionship, avoidance of loneliness	8	10	2	10	3	7
Happiness for individual parent (general)	8	4	5	4	7	6
Pride in children's accomplishments	3	3	10	5	6	5
Happiness for family	10	2	1	4	5	4
Children as family life, complete or close-knit family	8	3	2	4	5	4
Love, affection	6	4	1	3	4	4
Relief from strain, distraction from problems	4	3	0	2	2	2

dom, and companionship/avoidance of loneliness were highly salient to the Taiwan sample, continuity of family name was the most important advantage and unspecified help in old age ranked third in importance (after play and fun with children). Continuity of family name, which may be considered a traditional value, thus appears to be a major value of children, at least among those sampled. For the men it ranked far above all other values mentioned, and even for the urban middle-class it was among the three most important advantages of having children.

There are some striking differences among the subgroups, however. For the urban middle-class group and for women, play and fun with children were the most important value; and two other emotional advantages—happiness for the family in the case of the middle class, and companionship/avoidance of loneliness in the case of women—were ranked fairly high in importance by these subgroups. For the urban lower-class and male subgroups, on the other hand, continuity of family name was the most important advantage of children, and among the rural group it ranked second in importance, after unspecified help in old age.

As we have already noted in Chapter 1, the advantages described by the respondents may be divided into two categories, *intrinsic* and *extrinsic* values. In general, emotional or psychological values of children are intrinsic, whereas economic and utilitarian values are extrinsic. In comparing the responses of the Taiwan subgroups to the questions about the advantages of having children, we find that the two urban groups and women placed more emphasis on intrinsic values than did rural and male respondents, for whom extrinsic values were both more salient and more important.

Why others want children

Respondents were further asked for their opinions about why others in their community wanted to have children (Table 3.4). This question was designed to reveal social influences affecting respondents' own attitudes toward having children, as well as to elicit their perceptions of others' values. The most frequently mentioned reason, cited by 60 percent of the total sample, was continuity of family name, which as we have noted was also the most important reason respondents gave for wanting children themselves. A fourth of the sample mentioned help in old age without specifying the nature of the help, and 10 percent mentioned companionship and avoidance of loneliness. Smaller percentages mentioned other intrinsic values such as play and

Table 3.4 Perceived reasons why people in general want children
(Percentage of respondents who mentioned specified reasons, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
Continuity of family name	49	75	56	56	63	60
Unspecified help in old age	13	26	32	23	24	24
No reason given	40	11	9	29	12	20
Companionship, avoidance of loneliness	16	9	6	12	7	10
Play, fun with children; avoidance of boredom	7	13	3	6	8	7
Happiness for family	8	6	4	7	4	6
Happiness for individual parent (general)	10	4	2	5	6	6
Desire for more boys	4	5	4	6	3	4
Desire for particular combination of boys and girls, balance	4	2	5	3	4	4
Unspecified help (old age not mentioned)	1	2	6	2	3	3

fun with children, happiness for the family, and happiness for the individual parent. A fifth of the respondents were unable to think of any reason why others in their community would want children.

Assuming that intrinsic values associated with children are more modern than extrinsic values, if we compare the reasons for wanting children that respondents attributed to themselves with those they attributed to others in their community, it appears that the respondents were somewhat more modern than their neighbors, or than they perceived their neighbors to be. The intrinsic values of play, fun with children; companionship, avoidance of loneliness; and happiness for the individual parent were mentioned by respondents more frequently as advantages to themselves than as reasons for others to want children, and these values were also considered to be important to substantial numbers of respondents. Continuity of family name and unspecified help in old age—both traditional values—were attributed more frequently to others in the community than to the respondents themselves. On the other hand, that respondents placed great importance

on these traditional values suggests that they shared them with their neighbors, and even perhaps that they were projecting their own value orientation onto others.

Continuity of family name as a reason for others to want children was mentioned most frequently by the urban lower class and men, least frequently by the urban middle class. Rural respondents mentioned unspecified help in old age most frequently, perhaps because this value was most important to themselves. The urban middle class and women had more difficulty attributing a reason for wanting children to others in the community than did the other subgroups.

Reasons for wanting daughters and sons

One purpose of the VOC Study was to explore values related to children of a particular sex, since boys and girls may be desired for different reasons and socialized for different roles. A related objective was to measure the intensity of son preference, which is prevalent in many cultures, including the Chinese. Respondents were therefore asked whether it was important for them to have at least one girl and one boy among their children and, if so, why.

Reasons for wanting daughters. To ask why it is important to have a daughter seemed a little out of the ordinary to the Chinese respondents. In Taiwan, it is considered a misfortune for a baby to be a girl rather than a boy, because she is unable to pass the family name along to future generations and also, upon her marriage, is seen as taking part of her family's property to the family of her husband. To her parents, and especially to her grandparents, her marriage represents a loss of money and time invested in her upbringing. Female babies thus have little status, and if a girl is born, the mother and even the maternal grandmother are expected to express their regrets to the husband's family.

Nevertheless, girls are seen to have some desirable qualities, or utility functions, that allow them to "survive" in a Chinese family upholding the tradition of son preference. Those values cited most frequently by the VOC respondents are presented in Table 3.5. Nearly a third of the total sample mentioned help with housework and family chores on one hand, and companionship and closeness with the mother on the other. A fourth of the respondents said they would want a girl in order to achieve their preferred sex composition, and a fifth mentioned desirable personality traits of girls. Smaller percentages cited such psychological reasons as happiness for the family or individual parent and

Table 3.5 Reasons for wanting daughters
(Percentage of respondents who mentioned specified reasons, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
Help with housework, family chores; practical help	12	35	47	28	34	31
Companionship, closeness with mother	33	41	18	53	10	31
Parents' preferred sex ratio	22	24	30	17	34	25
Personality of girls	35	19	8	20	20	20
Help in caring for other children	5	6	2	3	5	4
Happiness for family	4	4	2	0	6	3
Happiness for individual parent (general)	4	4	1	0	6	3
Mixture of sexes for benefit of children	5	4	0	1	5	3
Religious rituals, ancestor worship	0	0	9	2	3	3
Companionship, comfort, care in old age	1	0	4	1	3	2

desiring a mixture of sexes for the benefit of the children. Three utilitarian reasons—wanting a girl to care for the other children, to perform religious rituals, and to care for the parents in their old age—were also mentioned, but by relatively few respondents.

As expected, responses varied by subgroup. Nearly half of the rural group and slightly more than a third of the urban lower class mentioned practical help from daughters, but only 12 percent of the urban middle class cited this reason for wanting a girl. That the rural and lower-class respondents emphasized this reason is not surprising, for families with farms and small businesses often rely on daughters for part-time assistance, whereas in industry and the professions, in which middle-class workers are more likely to be employed, employment is usually full-time and contractual.

Companionship for the mother was mentioned most frequently by the urban lower class and women, and was by far the most salient reason for having a daughter among the women sampled. Comparatively

few rural respondents mentioned this reason, perhaps because farm women have little time to spend with their children. In extended families, which are common among rural Taiwanese, it is usually the grandparents rather than the parents who take care of the children.

Parents' preferred sex ratio, third in frequency of mention, was most salient to men and rural respondents, least salient to women. This finding becomes more meaningful in the light of another: for the sample as a whole, two sons and one daughter were the most commonly preferred sex combination for the first three children. Thus it appears that for some of these respondents, at least, a daughter was wanted to "round out" the family and provide variety.

Girls' personalities, the fourth reason, were mentioned more frequently by the urban middle class than by the other subgroups. Many respondents said that girls had better personalities than boys, or that they were easier to discipline. This view is widely held in Taiwan, and some parents prefer to have a girl as the first child in the hope that her personality will favorably influence those of her brothers.

In general the rural group, and to a lesser extent the urban lower class, tended to stress the short-range utilitarian motive of practical help from daughters while they remain in their parents' home. However, lower-class and middle-class respondents mentioned another short-range utility function of daughters, help in caring for the other children, more frequently than did the rural group. The lower class, and to a lesser extent the middle class, emphasized the longer-range emotional value of companionship between mother and daughter. The middle class mentioned more frequently than the other groups other emotional values—girls' personalities, happiness for the family, and happiness for the individual parent. The major difference between men and women was the much more frequent mention by women of companionship for the mother.

Respondents were also asked to rate the importance of having a daughter as very important, somewhat important, or not important. Exactly half of the sample said that having a daughter was somewhat important, 40 percent that it was very important, and 10 percent that it was not important. Among the subgroups, the proportion giving the "very important" response was highest among women (65 percent, compared with 35 percent of the men), the rural group (57 percent), and the lower class (51 percent). Only 41 percent of the middle class considered having a girl to be very important. From the findings on reasons for wanting girls, it appears that the importance that rural and lower-class respondents attached to girls is related to the practical help

they expected from daughters. For the middle-class and for women, the importance seems to be associated more with companionship for the mother.

Reasons for wanting sons. The reasons why parents in Taiwan want sons have probably not changed since the early days of Chinese history. Many Chinese may not be able to say exactly why they want sons because the importance of sons has not been challenged and thus is widely accepted without question. When asked to rate the importance of having a son, 86 percent of the VOC respondents said it was very important, and only 3 percent said it was not important. The proportions who responded "very important" were 93 percent for the rural group, 91 percent for the urban lower class, 75 percent for the middle class, 90 percent for women, and 83 percent for men. Respondents in the rural and lower-class groups were thus almost unanimous in ascribing great importance to having a son, as were women.

The reasons respondents gave for wanting sons are presented in Table 3.6. Most of them may be classified as kin-group advantages, economic or practical reasons, or normative pressures. By far the most frequently mentioned reason for all subgroups was continuity of family name, cited by 71 percent of the total sample. Nearly a fourth of the sample mentioned help in old age without specifying the nature of the help; and much smaller percentages mentioned help from sons (unspecified), help in the family business or farm, conformity to social norms, having sons to share financial responsibility and provide security, satisfying the desires of other kin, the fact that in Chinese society sons (but not daughters) are considered to remain in the family after they marry, and having sons to benefit society.

When reasons for wanting sons are compared with reasons for wanting daughters, it is apparent that respondents in Taiwan attributed different values to the two sexes. Girls were wanted mainly for psychological reasons and secondarily for short-range utilitarian purposes. Boys, on the contrary, were wanted mostly for long-range utilitarian reasons (their ability to continue the lineage and provide economic support to the parents) and secondarily in order to satisfy social expectations. Even wanting sons to benefit society may have been a response to normative pressures in some cases.

Continuing the family name was cited most often by the urban lower class (80 percent) and men (76 percent). This value was slightly more salient to the middle class than to the rural group (69 and 65 percent, respectively). Help in old age showed greater variation among the

Table 3.6 Reasons for wanting sons
(Percentage of respondents who mentioned specified reasons, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
Continuity of family name	69	80	65	66	76	71
Unspecified help in old age	8	21	41	26	22	24
Unspecified help (old age not mentioned)	7	5	9	7	7	7
Help in family business, farm	5	6	6	2	9	6
Conformity to social norms	7	7	4	4	8	6
Sharing of financial responsibility; insurance, security	5	3	7	4	6	5
To satisfy desires of other kin	7	7	1	4	6	5
Only sons remain in family[a]	7	4	4	6	4	5
To benefit society	2	2	5	1	5	3
Parents' preferred sex ratio	4	2	1	2	2	2

a This country-specific code reflects the Chinese patrilineal system. Daughters, when they marry, become part of their husbands' families, whereas sons remain part of their own families of origin after marriage.

socioeconomic subgroups, with 41 percent of the rural group mentioning it, compared with 21 percent of the urban lower class and 8 percent of the middle class. Thus the less better off respondents were economically, the more they were inclined to value sons for help in old age. Somewhat more women than men cited this utilitarian value as well, possibly because women are usually less independent economically than men.

Variation across subgroups is less noticeable for the other reasons given. Normative pressures (i.e., conformity to social norms and wanting to satisfy the desires of other kin) and wanting sons to benefit society were slightly more salient to urban and male respondents than to the rural group or women; the rural group mentioned economic reasons for wanting sons somewhat more frequently than did the other two socioeconomic groups.

In general the men tended to emphasize the economic utility of sons more than women and to be more concerned about the expectations of other kin and society. The women may have therefore been more individualistic than the men in their value orientation, or they may have been less socially oriented.

Intensity of son preference

The VOC questionnaire included several other open-ended questions designed to measure the intensity of son preference. Respondents were first asked how many boys and girls they would want to have if they were starting their families again, and in what order they would like to have them. The mean ideal number of sons for Taiwan respondents was 1.77, whereas the mean ideal number of daughters was 1.22. Sixty percent of respondents said they would want to have a son first, 12 percent said a girl, and 27 percent had no preference. Next, respondents were asked how long they would keep trying to have a boy if they had only daughters. The largest group (40 percent) said they would stop after having three girls, 15 percent said they would stop after having two, and 10 percent said they would stop after four (Table 3.7). But nearly a fifth (18 percent) said they would continue childbearing until a son was born. Since the question was hypothetical—many in the sample actually had sons—the responses do not necessarily reflect intended behavior, but rather respondents' choices in the absence of real-life constraints. Nevertheless, the pattern of responses suggests that among many of those sampled the desire for sons might outweigh the desire for a family of a particular size.

Differences between socioeconomic subgroups are greater than those between men and women. Almost three-fourths of the middle class would stop after having one, two, or three girls, compared with 44 percent of the urban lower class and 46 percent of the rural group. Substantial numbers of the urban lower class (26 percent) and the rural group (22 percent) would continue bearing children until a son was born, but only 6 percent of the middle class would do so. The desire for sons thus appears strongest among the two lower socioeconomic groups. Slightly more men than women (20 percent and 17 percent respectively) would not stop having children until a son was born.

Disadvantages of having children

While aware of the advantages and benefits of having children, people usually perceive some disadvantages of parenthood. In the minds of most parents, having children is a mixed blessing, even if it is a blessing.

Table 3.7 Intensity of son preference
(Percentage distribution of responses to hypothetical question "What would you do if you had no sons and kept having daughters?" by subgroup)

Response	Urban middle	Urban lower	Rural	Female	Male	All respondents
Would stop after						
1 girl	1	0	0	1	0	0
2 girls	26	10	9	15	15	15
3 girls	48	34	37	38	41	40
4 girls	6	10	15	11	10	10
5 girls	1	2	7	4	3	4
6 girls	0	0	1	0	1	1
Would continue childbearing until son was born	6	26	22	17	20	18
Number of sons up to God or fate	1	6	2	2	4	3
Uncertain	1	6	2	3	4	3
No response	0	1	0	1	0	0
Inapplicable[a]	10	4	5	9	3	6
All responses	100	99	100	101	101	100

NOTE: Percentages may not sum to 100 because of rounding.

a This category includes both respondents who were not asked this question and those who said having a son was not important.

VOC respondents were asked to name all the difficulties or disadvantages connected with having children that they could think of, in contrast with not having children. Respondents were able to name an average of 1.8 disadvantages, compared with 2.1 advantages. The most frequently mentioned disadvantages are presented in Table 3.8.

Nearly half (47 percent) of all respondents cited general financial costs associated with raising children. The noise, disorder, and nuisance caused by children were mentioned by 29 percent, and the health problems of children were mentioned by 19 percent. Less salient disadvantages were the general lack of flexibility and freedom for parents, the physical work and fatigue caused by children, such opportunity costs as restrictions on time and career, the emotional strain of raising children, general rearing problems, the need to discipline and inculcate moral behavior, and the responsibility of parenthood.

The prominence of financial expenses associated with children indicates that this disadvantage may be a useful point to emphasize in edu-

Table 3.8 Most frequently mentioned disadvantages of having children
(Percentage of respondents who mentioned specific disadvantages, by subgroup)

Disadvantage	Urban middle	Urban lower	Rural	Female	Male	All respondents
General financial costs	32	45	64	35	60	47
Noise, disorder, nuisance	27	41	23	30	28	29
Health problems of children	16	16	24	25	12	19
General lack of flexibility, freedom	18	18	5	15	12	14
Physical work, tiredness caused by children	11	11	18	19	6	13
Restrictions on time	20	7	4	15	5	10
General emotional strain	15	11	4	12	7	10
General rearing problems	8	12	7	6	13	9
Restrictions on job, career	8	5	14	10	7	9
Responsibility of parenthood	8	10	7	8	9	8
Discipline, moral behavior	7	11	6	7	8	8

cational efforts to discourage rapid population growth. Not surprisingly, the lower the socioeconomic status of the respondent group, the more salient this disadvantage was: 64 percent of the rural group and 45 percent of the urban lower class mentioned general financial costs, compared with 32 percent of the middle class. But even for middle-class respondents the financial burden was highly salient. Nearly twice as many men as women mentioned financial costs, probably for the reason that men are the principal breadwinners in most families and therefore feel the burden more.

Noise, disorder, and nuisance were most salient to the urban lower class, 41 percent of whom mentioned this disadvantage, compared with 27 and 23 percent of the urban-middle and rural groups respectively. This is understandable in view of the higher incidence of juvenile delinquency in urban slums than in urban middle-class and rural areas. Lower-class children are usually less disciplined and remain in school for a fewer number of years than children from the middle class. They also tend to be less disciplined than children raised in the country, because the parent-child relationship is less intimate in an ur-

ban setting. As expected, more women than men mentioned noise, disorder, and nuisance, but the difference was not great.

By virtue of their maternal role, women tend to be more concerned with their children's health than are men. This generalization was borne out by the relative frequency with which men and women mentioned health problems of children: 12 and 25 percent respectively. Health problems were also more salient to the rural group (24 percent) than to the two urban groups (both 16 percent), perhaps because health facilities are more accessible in urban areas.

On the other hand, lack of flexibility and freedom for the parents was much more salient to the urban groups (both 18 percent) than to the rural respondents (5 percent). One reason may be that urban residents usually work away from their homes and have to make childcare arrangements for periods when they are away, whereas people engaged in agriculture usually work at home. In addition, rural parents can often depend on older relatives who live with them to take care of the children while the parents are working. It may also be that the social activities of rural people allow more easily for the participation of children than the social activities of urban residents, who must again make formal arrangements for their children if they want to spend an evening away from home.

Rural respondents and women mentioned the physical work and fatigue caused by children more often than did the two urban groups and men. Because rural people and women generally spend more time with their children than the other groups, this finding is not surprising.

Restrictions on time were more salient to women and the middle class than to the other groups. In the case of women, this was probably because they spent more time with their children than their husbands did. In the case of the middle class, it may be that because most respondents were office workers, they felt more restrictions on their time than did respondents in the other socioeconomic groups, who mostly worked in family-operated shops or on their own farms. Office workers are expected to arrive at work punctually, and having to care for young children sometimes disrupts parents' schedules. Many private businesses in Taiwan refuse to employ married women on the assumption that their childcare responsibilities will prevent them from being on the job regularly. Perhaps, too, middle-class respondents had more interests outside the home than did lower-class and rural respondents and thus felt the time constraint more keenly.

The salience of general emotional strain was positively associated with socioeconomic status, being mentioned most frequently by the

middle class, least frequently by the rural group. Nearly twice as many women as men mentioned this disadvantage of children. General rearing problems, on the other hand, were most salient to men and the lower class, somewhat less salient to the middle class, and cited least frequently by the rural group and women. The same pattern of frequency emerges for problems of discipline and moral behavior. Somewhat unexpectedly, it was the rural group who mentioned restrictions on their jobs and careers most often; not surprisingly, however, more women than men mentioned this opportunity cost.

As with advantages, disadvantages were assigned to general categories for purposes of analysis (see Exhibit 3.1). The percentage of respondents in each subgroup who mentioned at least one disadvantage assigned to each major code category is found in Table 3.9. Emotional costs emerged as the most salient general disadvantage of children among Chinese respondents, 46 percent of whom mentioned at least one specific difficulty coded under this heading. Financial costs and opportunity costs ranked second and third, mentioned by 26 and

Table 3.9 General disadvantages of having children
(Percentage of respondents who mentioned at least one disadvantage coded under each of specified major code categories, by subgroup)

Major code category	Urban middle	Urban lower	Rural	Female	Male	All respondents
Emotional costs	44	54	39	47	44	46
Financial costs	18	24	37	20	34	26
Restrictions on alternative activities	29	16	14	23	16	20
Physical demands on parents	6	6	10	10	3	10
Marital problems	1	1	0	0	2	1
Kin group costs, problems of inheritance	0	0	0	0	0	0
Societal costs, overpopulation	0	0	0	0	0	0
Other disadvantages	1	0	0	0	1	0
Total number of responses	264	269	262	415	380	795
Mean number of responses	1.8	1.9	1.8	1.9	1.8	1.8

20 percent respectively. The fourth major disadvantage was physical demands on parents (10 percent). It is noteworthy that no one mentioned societal costs, such as overpopulation, even though the Taiwan government has had an official policy to reduce population growth since 1968 and an active family planning program since 1959. The reason may be that the phrasing of the open-ended question about the disadvantages of children led respondents to consider only disadvantages to themselves.

Among the subgroups, emotional costs were most salient to the urban lower class (54 percent), least salient to the rural group (39 percent). Financial costs are negatively associated with socioeconomic status, being most salient to the rural group (37 percent) and considerably less so to the middle-class group (18 percent). Fourteen percent more men than women mentioned this disadvantage. Rural and women respondents mentioned physical demands on parents more frequently than the other groups; middle-class and women respondents mentioned restrictions on alternative activities most often.

As with advantages, respondents were asked to rank in order of importance the disadvantages they had named. In this case, the most salient disadvantages were also the most important (Table 3.10). General financial costs ranked first, considered most important by 32 percent of the Taiwan sample. Noise, disorder, and nuisance associated with children were second in importance (15 percent), health problems third (10 percent). The other disadvantages were ranked most important by between 6 and 3 percent of the total sample, in roughly the same order as frequency of mention. Importance also corresponds closely with frequency of mention for the individual subgroups.

Subgroup differences

By comparing the data in Tables 3.8, 3.9, and 3.10, it is possible to construct a rough profile of the various subgroups according to the disadvantages of children that were most salient and most important to each.

For the urban middle class, emotional costs—in particular, noise and disorder, children's health problems, and general emotional strain—were of greatest concern. This group was also more aware than the other socioeconomic groups of the opportunity costs of parenthood, especially restrictions on the respondents' time and the general lack of freedom caused by children. Financial considerations were important, too, though not so important to this relatively affluent group as to the urban lower-class and rural groups. Finally, the physical demands

Table 3.10 Most important disadvantages of having children
(Percentage of respondents who ranked specific disadvantages first in importance, by subgroup)

Disadvantage	Urban middle	Urban lower	Rural	Female	Male	All respondents
General financial costs	16	34	46	23	42	32
Noise, disorder, nuisance	17	20	9	14	16	15
Health problems of children	11	10	11	15	7	10
Physical work, tiredness caused by children	5	4	9	9	3	6
General lack of flexibility, freedom	7	8	2	7	5	6
Restrictions on time	11	2	2	8	2	5
Responsibility of parenthood	6	4	5	5	5	5
General emotional strain	8	3	1	5	3	4
Discipline, moral behavior	3	6	3	3	4	4
Restrictions on job, career	2	2	4	4	1	3
General rearing problems	6	1	2	3	3	3

of children were both salient and important to a small but statistically significant percentage of respondents in the middle class.

The urban lower class also stressed emotional costs of children, being most bothered by noise and disorder, and somewhat less by children's health problems and the need to discipline children. Financial and opportunity costs were also of major concern, being more important to this group than to the middle class. The physical demands of children were about as important to this group as to the middle class but less important than to the rural group.

Rural respondents were more concerned than the other socioeconomic groups about the financial expense of childrearing and ranked this disadvantage first in importance. Emotional costs ranked second, respondents placing greatest importance on their children's health problems and on noise and disorder. The physical demands of children on their parents were more important to this group than to both urban groups, but opportunity costs were less important.

For women the most salient and most important disadvantages were emotional costs, especially their children's health problems, the noise and disorder of children, and physical work and tiredness. Women were

slightly more concerned about these emotional disadvantages than men, and their specific concerns appear to be related to their daily involvement with the children. Restrictions on alternative activities were next in salience but ranked third in importance, after financial costs. Understandably, more women than men gave importance to opportunity costs, for their activities were more likely to be circumscribed by parenthood. Although financial costs were also highly salient and important to women, for men they were even more so. The physical work and fatigue of childrearing were somewhat less important to women than the other categories, but were more important to them than to their husbands.

Financial and emotional costs associated with children were by far the greatest concerns of the men sampled—emotional costs ranking highest in salience, financial costs ranking somewhat higher in importance. Chief among the emotional disadvantages were the noise, disorder, and nuisance of children. As we have already noted, men were less concerned about the physical demands on parents and the restrictions on alternative activities than were women, probably because they had less exposure to these problems.

Reasons for wanting and not wanting more children

The previous sections have dealt with respondents' attitudes toward children in general and toward daughters and sons specifically. This section will present findings on their attitudes toward family size. Respondents were asked whether they wanted more children or not and what reasons they had for desiring a particular number of additional children.

Of the 432 respondents in Taiwan, only 23 percent wanted a specific number of additional children. Two percent wanted more children but did not specify the number, 68 percent were satisfied with the number they already had, and 7 percent could not make up their minds whether or not to have additional children. Those who wanted a specific number of additional children were asked why they did not want fewer or more than that number. Those who did not want more children were asked to give reasons why they did not. In addition, all respondents were shown a list of 17 reasons commonly given for wanting another child and asked to rate each reason as very important, somewhat important, or not important. They were also presented with a list of nine reasons for not wanting an additional child and asked to rate the importance of each.

Reasons for not wanting fewer than the desired number

Only respondents who actually wanted additional children were asked why they would not want fewer than the total desired number. Of the 98 respondents who did want more children, 41 percent were middle-class, 23 percent were lower-class, and 36 percent were rural. One reason for the relatively large number of middle-class respondents in this category may be that they had smaller families, on the average, than the other two socioeconomic groups when the survey took place—2.2 children, compared with 2.9 for the lower class and 2.8 for the rural group.

The question elicited answers quite different from those respondents gave when asked about the advantages of children in general. The most frequently mentioned reasons are presented in Table 3.11.

One fourth of the respondents cited companionship for children already born. Other salient reasons were the desire for more sons (mentioned by 20 percent), the desire for a particular combination of boys and girls (15 percent), and the desire to avoid an only child (11 percent). Thirteen percent begged the question by saying, in effect, that they wished a particular number because it was a desirable number to have. Somewhat less salient reasons were the desire for sons to provide security to the parents in their old age, the play and fun that children bring to a family, concern about possible child deaths, and the desire to continue the family name. Thus three of the nine more frequently mentioned reasons were clearly associated with son preference.

Companionship for other children is positively associated with socioeconomic status, being mentioned most frequently by the middle class and least frequently by the rural group. (Differences between subgroups, however, were not great.) That this reason may have been more salient to middle-class respondents than to the other groups in part because of their lower current parities is suggested by the fact that a fourth of the middle-class group also mentioned wanting to avoid an only child. Another explanation may be differences in family structure. In nuclear families, characteristic of the middle class, siblings and parents are the main companions for children, whereas in extended families there are other relatives. For middle-class respondents, then, the two most salient reasons for not wanting fewer than the desired number of children appear to be child-centered.

The desire for more boys and the desire for sons to share the responsibility of caring for parents in their old age were much more salient to the rural group than to the two urban groups. As we have already

Table 3.11 Reasons for not wanting fewer than desired number of children

(Percentage of respondents wanting more children who mentioned specified reasons, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
Companionship for other children	28	22	20	21	26	24
Desire for more boys	13	17	31	31	10	20
Desire for particular combination of boys and girls, balance	15	17	14	13	18	15
Good number to have, want that number	15	17	9	15	12	13
To avoid an only child	25	0	3	13	8	11
Desire for sons to share responsibility of caring for parents; old-age security	5	0	17	4	12	8
Play, fun with children; avoidance of boredom	10	9	6	6	10	8
Anxiety over infant mortality	8	4	11	6	10	8
Continuity of family name	8	9	6	8	6	7
Number of respondents	40	23	35	48	50	98

noted, rural respondents stressed help in old age and sharing of financial responsibility in citing reasons for wanting sons (Table 3.6). Their reasons for not wanting fewer than the desired number of children thus appear to be more utilitarian and parent-centered than those of the middle class—although a fifth of the rural respondents also mentioned companionship for existing children.

Continuity of family name, also related to the utility function of sons, was slightly more salient to the urban groups than to rural respondents. Differences between men and women on these responses are mixed. More men than women mentioned wanting sons for security in old age, but many more women than men mentioned wanting more boys and slightly more mentioned continuity of family name.

The urban lower class mentioned wanting a particular combination

of boys and girls, and also the tautological reason of "a good number to have," somewhat more frequently than the other two groups. The first may be either child-centered or parent-centered, depending on the motivation for a particular combination of sexes. The second may reflect respondents' sensitivity to norms about family size.

Reasons for not wanting more than the desired number

The same respondents were next asked why they would not want more than the total number of children they desired. Table 3.12 presents the most frequent responses. More than half of those who were asked this question mentioned general financial costs, and for the first time a substantial number (18 percent) mentioned educational costs. Nearly a fourth said they did not want to exceed the number of children that was best for rearing and ease of handling, and 10 percent said they

Table 3.12 Reasons for not wanting more than desired number of children

(Percentage of respondents wanting more children who mentioned specified reasons, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
General financial costs	35	65	66	65	42	53
To have correct number of children for rearing, ease of handling, happiness	45	4	9	6	38	22
Educational costs	20	9	23	17	20	18
Would already have number of children wanted; enough boys, girls	8	22	6	15	6	10
Noise, disorder, nuisance	5	9	14	15	4	9
Discipline, moral behavior	5	13	6	6	8	7
Disadvantages to society; concern about overpopulation	10	4	3	4	8	6
Health hazard of pregnancy; maternal health	5	0	9	8	2	5
Physical work, tiredness caused by children	3	4	14	8	6	7
Number of respondents	40	23	35	48	50	98

would have already had the number of children they wanted. Smaller percentages mentioned some of the disadvantages of children discussed earlier—noise and disorder, problems of discipline, and the physical work and fatigue caused by children. In addition, two new reasons were offered: disadvantages to society, such as overpopulation, and the hazard of pregnancy to the mother's health. Apparently concern over the population problem did not become salient to Chinese respondents until they achieved their desired parities. It is also possible that some respondents offered this reason as a socially acceptable rationalization for a decision they had made on other grounds.

Among the socioeconomic subgroups, general financial costs of children were much more salient to the rural and urban lower-class groups than to the middle class, a finding that is consistent with the relative emphasis the three groups placed on economic costs as a disadvantage of children in general. Educational costs, however, were more salient to the rural and middle-class groups than to the lower class. In the case of the middle class, respondents may have had more ambitious plans for their children's education than the other two groups—either private schooling or schooling beyond the nine years of public education. Responses to other VOC questions reveal that educational aspirations for daughters were highest among the middle class, lowest among rural respondents. Rural respondents, on the other hand, were probably more concerned about educational expenses than the lower-class group because such costs represented a larger share of their income. Besides, if they wished their children to attend an institution of higher education they had to send them to cities where such institutions are located, and this would entail additional living expenses for the family. What is somewhat surprising, in the light of previously reported findings, is that more women than men (65 and 42 percent respectively) mentioned general financial costs as a reason for not wanting more than the desired number of children; more men than women, however, cited educational costs.

Middle-class respondents and men placed much more stress than the other groups on having the correct number of children for rearing, and in fact this was the most frequently cited reason among middle-class respondents for not exceeding the desired number of children. Their concern may have been related to a "modern," or child-centered, desire to give each child individual attention in order to develop the child's full potential. This response may also indicate awareness of the financial cost of "high quality" children.

The urban lower-class group mentioned much more often than the

other two groups that they already had the number of children they wanted. This finding accords with the higher average parity among lower-class respondents. One reason why more than twice as many women as men gave this response may have been that women were more concerned about the health hazard of pregnancy and the physical demands of children, problems that usually increase with parity.

Concern about disadvantages to society was expressed more often by the middle class than by the other two socioeconomic groups and by more men than women. Several interpretations can be offered for this finding. Middle-class people and men were better educated than the other groups, on the average, and probably more knowledgeable about problems caused by rapid population growth. The middle class may also have felt more directly than the other two classes the economic burden of welfare measures designed to cope with that growth. Finally, being relatively affluent, middle-class respondents may have wished to maximize their economic advantage by having smaller families. There is ample evidence in the demographic literature of a negative association between socioeconomic status and fertility, and thus the negative correlation seen here was expected.

Reasons for not wanting more children

When the 292 respondents who did not wish to have more children were asked why, they cited the same reasons that the other group of respondents had offered for not wanting more than the desired number of children (Table 3.13). The general pattern of responses resembles that of Table 3.12, the most frequently mentioned reasons being general financial costs (58 percent), already having the number of children wanted (40 percent), educational costs (14 percent), and already having the correct number of children for rearing and ease of handling (12 percent). Smaller percentages of respondents mentioned physical work and fatigue, health hazards associated with pregnancy, the responsibility of parenthood, noise and disorder, and problems of discipline. Seven percent suggested that having more children would be disadvantageous to society by contributing, for example, to the population problem. Only 3 percent mentioned restrictions on job or career, which of course parents are likely to feel most keenly when the first child is born.

General financial costs of children were more salient to rural and urban lower-class respondents than to the middle-class group, but educational costs were most salient to the middle class, least salient to the urban lower class. Traditionally, educational aspirations among urban

Table 3.13 Reasons for not wanting another child
(Percentage of respondents not wanting another child who mentioned specified reasons, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
General financial costs	40	65	66	51	64	58
Already have number wanted; enough boys, girls	38	50	31	48	32	40
Educational costs	23	8	12	10	18	14
Already have correct number of children for rearing, ease of handling, happiness	22	8	7	12	12	12
Physical work, tiredness caused by children	1	8	14	11	4	8
Disadvantages to society; concern about overpopulation	6	5	12	5	10	7
Health hazard of pregnancy; maternal health	7	6	4	5	6	6
Responsibility of parenthood	6	6	5	7	4	6
Noise, disorder, nuisance	4	9	1	6	4	5
Discipline, moral behavior	6	5	2	4	4	4
Restrictions on job, career	2	1	7	5	2	3
Number of respondents	90	107	95	149	143	292

lower-class people in Taiwan have been weak, even in comparison with those of rural people.

Having the right number of children for ease of handling and rearing was much more salient to the middle class than to the other two groups. Concern about disadvantages to society and overpopulation was cited more frequently by rural respondents than by the other two socioeconomic groups, however. More men than women were concerned about both the general and the educational costs of an additional child and about the costs to society.

Most important reasons for wanting and not wanting another child

A structured format was used to ascertain the importance of various

reasons for wanting and not wanting more children. All respondents were asked to rate as very important, somewhat important, or not important 17 reasons for wanting another child and nine reasons for not wanting another child. Tables 3.14 and 3.15 show in rank order the percentages of respondents who considered the reasons to be very important.

Although a utilitarian reason for wanting another child ranked highest for the total sample, 41 percent considering it very important to carry on the family name and traditions, a number of emotional reasons also were very important to substantial percentages of respondents: the special feeling that exists between parent and child (37 percent), because it is fun to have children around the house (34 percent), to share what I have and know with children (30 percent), to help me learn about life and myself (26 percent). Wanting a son or another son and concern about child mortality, which both ranked fairly high, probably belong in the utilitarian group. In this case, respondents seemed resistant to kin-group pressures, for only 10 and 6 percent respectively rated spouse's desire for more children and relatives' preferences as very important.

For the middle class, the most important reasons were emotional—the special feeling between parent and child, fun to have children around the house, to share what I have and know with children, and to help me learn about life and myself—although 28 percent considered having a boy or another boy to be very important. The urban lower class ranked both utilitarian and emotional reasons as most important—to carry on the family name and traditions, the special feeling between parent and child, fun to have children around the house, to have enough children survive to adulthood, and wanting a boy or another boy, in that order. The rural group, in contrast, laid greatest stress on utilitarian reasons—to carry on the family name and traditions, wanting a boy or another boy, to have a child to help me in old age. They attached somewhat less importance to emotional reasons such as the special feeling between parent and child. Women scored higher than men on the importance of all reasons for wanting another child, in some cases significantly higher. That they also scored consistently higher than men on reasons for not wanting another child (Table 3.15) suggests that women had stronger feelings, both pro and con, about having another child. Men attached greatest importance to an extrinsic reason for wanting another child (to continue the family name and traditions), women to an intrinsic one (the special feeling between parent and child).

Table 3.14 Most important reasons for wanting another child
(Percentage of respondents who rated specified reasons as very important, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
To carry on family name, traditions	27	48	49	45	37	41
For special feeling between parent and child	42	35	34	51	23	37
Fun to have children around house	40	32	28	43	24	34
Want a boy, another boy	28	29	40	37	28	32
To share what I have and know with children	37	26	27	40	20	30
To help me learn about life and myself	31	24	23	32	19	26
To have enough children survive to adulthood	13	30	27	26	20	23
Want companion for my child, children	24	23	19	27	17	22
To have child to help me in my old age	9	21	35	30	13	22
Want a girl, another girl	16	15	19	17	16	16
My religious duty to have children	10	18	21	26	6	16
Enjoy caring for, raising children	14	16	12	19	9	14
One more person to help family economically	4	14	22	21	5	13
Enjoy having a small baby	10	11	15	17	7	12
Spouse wants more children	5	11	13	17	3	10
To make my marriage stronger	4	9	13	12	6	9
Relatives feel I should have more children	6	3	9	7	6	6

Among the reasons for not wanting another child (Table 3.15), the financial burden to the family ranked highest in importance for the sample at large, 52 percent considering it to be very important. Concern about not being able to give other children enough care and attention ranked second (44 percent). Other, parent-centered reasons

Table 3.15 Most important reasons for not wanting another child
(Percentage of respondents who rated specified reasons as very important, by subgroup)

Reason	Urban middle	Urban lower	Rural	Female	Male	All respondents
Financial burden to family	32	56	69	54	51	52
Would not be able to give enough attention, care to other children	50	35	49	53	36	44
Would be a lot of work, bother for me	33	37	54	51	32	41
Would be emotional strain for me	29	28	52	46	26	36
Would restrict my freedom to do other things I enjoy	22	27	47	38	26	32
Disadvantages to society; concern about overpopulation	36	22	30	32	27	29
Spouse does not want more	18	23	28	25	21	23
Would cause problems, strains between me and spouse	16	16	13	19	11	15
Would not be able to spend as much time with spouse	15	9	13	15	9	12

considered very important by substantial percentages of respondents were the work and bother of another child, the emotional strain, restriction of freedom to do other enjoyable things, and spouse's desire not to have more children. Twenty-nine percent rated disadvantages to society and concern about overpopulation as very important, a finding that is somewhat surprising in view of the small percentages of respondents who mentioned this reason when answering the open-ended questions about why they did not want more children or more than the desired number. Again, the reason for the discrepancy may lie in the way the open-ended questions were posed.

The importance of financial burden to the family is negatively associated with socioeconomic status, and for the rural and urban lower-class groups this was the most important reason for not wanting

another child. A majority of rural respondents also rated the work and bother of another child, the emotional strain, and not being able to give enough attention to other children as very important. Exactly half of the middle class rated not being able to give other children enough attention and care as very important, making it the most important reason for this group. The importance that middle-class respondents attached to this reason is consistent with the high frequency with which they had earlier mentioned having the correct number of children for rearing and ease of handling as a reason for not having more than the desired number of children (Table 3.12). Although, as we have already noted, more women than men considered all reasons for not having another child as very important, differences in the percentages of women and men giving the "very important" response were greatest for emotional strain, work and bother, and not being able to give enough attention or care to other children.

Opinions about children

A set of 45 Likert-type attitude items was used to determine respondents' general attitudes toward children and parenthood. These VOC items, expressing positive and negative attitudes, were developed from a VOC pilot survey conducted in Hawaii, which was subsequently modified on the basis of pretests in the six countries involved in the VOC Study. The purpose of administering the items was twofold: to compare responses to the items with those obtained from the open-ended questions and to permit quantified analysis of values associated with children. This approach had one limitation, however. Because the attitude items were initially selected on the basis of the pilot survey in Hawaii and were reduced in number to shorten the questionnaire, some values relevant to Asian parents were not adequately represented in the set. For example, continuity of family name and lineage proved to be an important value in Taiwan and other Asian countries, but only two items (one about continuing the family traditions, the other about continuing the family name) dealt with this value. Other dimensions of this value worth exploring in Taiwan would be having children for the succession of family property, for the worship of ancestors and oneself after death, and for keeping the blood line alive. Also underrepresented were statements related to the security provided by children to their parents. There was only one item about care of parents in general or care in old age. Factor clusters derived from the VOC attitude set do not match very well the value clusters obtained through open-ended questions, possibly because of the incompleteness of the VOC set.

Respondents had six response choices for each VOC item: to agree strongly, moderately, or slightly, or to disagree strongly, moderately, or slightly. The items were scored on a scale from 1 to 7, with 1 representing strong disagreement; 7, strong agreement; and 4, neutrality in the event that respondents insisted they had no opinion. They were then factor-analyzed with varimax rotation. The 45 items, their factor structure, and their mean scores for the total sample are presented in Table 3.16.

Thirty-three of the 45 items expressed positive or pronatalist opinions; 12 expressed negative opinions or recognition of alternatives to childbearing. All of the positive items elicited general agreement, but several of the pronatalist items did not. For example, item 11 (Considering the pressures from family and friends, a person really doesn't have much choice whether or not to have children) and item 38 (It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have) had low mean scores. These statements may have provoked disagreement because they suggest that people do not really have control over their own behavior. Items with which Chinese respondents agreed most strongly emphasized the companionship children provide (item 36), the need for children to perpetuate the family name and traditions (items 7 and 34), the opportunity parents have to influence the behavior of their children (item 33), and the incentive that children give their parents to succeed in life (item 6). Most of the negative items and items suggesting alternatives to children elicited general agreement, but only slight agreement. For example, items 39 (When you have children, you have to give up a lot of other things that you enjoy), 10 (Always having children around is a great mental strain), 41 (Before having a child, a couple should consider whether it would interfere with the wife's work or not), 19 (Children limit you in what you want to do and where you want to go), 1 (Caring for children is a tedious and boring job), and 9 (A couple ought to think seriously about the inconveniences caused by children before they have any) all had mean scores between 4 and 5. One item suggesting a material alternative to children elicited general disagreement: 32 (Before having a child, a couple should consider whether they would rather use their money for something else). Most Chinese parents would probably agree that parents should sacrifice their own happiness on behalf of their children.

Six factors containing items having factor loadings of .40 or higher were extracted from the data for the total sample. Seven items, shown at the end of Table 3.16, did not have high loadings on any of the factors.

Table 3.16 Factor structure of 45 attitude items after varimax rotation, for total sample

Item	I	II	III	IV	V	VI	Communality	Mean
Items ≥ .40 on Factor I only								
30 A person who has been a good parent can feel completely satisfied with his achievements in life	**.65**	.04	.08	−.00	−.03	−.07	.44	6.12
31 The family with children is the basis for all that is good in our society	**.65**	.08	.05	.01	−.05	−.00	.43	6.09
42 Having children is a sign of blessing on a marriage	**.58**	−.02	.22	−.03	.04	.11	.40	6.25
43 The family with children is the only place in the modern world where a person can feel comfortable and happy	**.58**	.23	.08	−.01	−.08	−.01	.41	6.07
33 One of the best things about being a parent is the chance to teach children what they should and should not do	**.52**	.33	−.22	−.00	.13	−.03	.45	6.27
35 A person can feel that part of him lives on after death if he has children	**.52**	.14	.01	.01	.08	.04	.31	5.73
24 For most people, it is inevitable to have children	**.50**	.11	.08	.08	−.03	.06	.29	6.06
29 Just the feeling a parent gets of being needed is enough to make having children worthwhile	**.49**	.33	.17	.07	.10	−.05	.40	5.78
36 One of the best things about having children is that you are never lonely	**.49**	.14	.20	.10	−.00	.20	.36	6.46
40 The really important things in life can be learned only from the experience of raising children	**.48**	.09	.25	.16	.14	−.00	.36	5.86
28 It is only natural that a woman should want children	**.47**	.02	.14	.01	.14	.19	.30	6.19

8	It is only natural that a man should want children	**.40**	.05	.21	.10	.02	.27	.30	6.23
13	All the efforts a parent makes for his children are worthwhile in the long run	**.40**	.16	.17	.02	.35	−.04	.33	6.08
Items ≥ .40 on Factor II only									
2	A good reason for having children is that they can help when parents are too old to work	−.02	**.66**	.28	.14	−.04	−.10	.56	5.13
3	Raising children is an act of virtue	.16	**.63**	.10	.10	.03	−.09	.46	5.50
18	Having children is the most important function of marriage	.24	**.62**	.14	.10	−.02	−.00	.48	5.49
7	It is important to have children so that the family traditions will live on	.27	**.58**	.14	−.00	−.28	.09	.53	6.31
34	A man has a duty to have children to continue the family name	.21	**.58**	.08	.04	−.15	.19	.46	6.25
12	It is a person's duty to society to have children	.09	**.47**	.10	−.05	.22	.19	.33	5.46
15	One of the highest purposes of life is to have children	.24	**.47**	.29	−.03	.05	−.10	.38	4.99
Items ≥ .40 on Factor III only									
44	A person who has no children can never really be happy	.07	.19	**.68**	.06	.10	−.07	.53	4.55
45	A boy becomes a man only after he is a father	.31	.22	**.59**	.14	−.09	.01	.54	5.46
22	After becoming a parent, a person is less likely to behave immorally	.14	.13	**.56**	−.05	.11	−.03	.37	5.43
16	A girl becomes a woman only after she is a mother	.30	.11	**.47**	.18	−.05	.06	.37	5.83
27	A person with children is looked up to in the community more than a person without children	.18	.35	**.47**	.15	.05	−.01	.41	4.74

Table 3.16 *(continued)*

Item	I	II	III	IV	V	VI	Commu-nality	Mean
21 A young couple is not fully accepted in the community until they have children	.19	.38	**.42**	.15	.06	−.07	.40	4.45
Items ⩾ .40 on Factor IV only								
19 Children limit you in what you want to do and where you want to go	−.00	−.03	.12	**.68**	−.03	.05	.49	4.75
37 Raising children is a heavy financial burden for most people	.11	.26	−.01	**.60**	.06	.02	.45	5.70
39 When you have children, you have to give up a lot of other things that you enjoy	.25	−.07	.14	**.56**	.02	.00	.41	4.91
1 Caring for children is a tedious and boring job	−.24	.20	.18	**.51**	.04	.10	.42	4.78
10 Always having children around is a great mental strain	.06	.37	.07	**.50**	.13	−.13	.44	4.57
41 Before having a child, a couple should consider whether it would interfere with the wife's work or not	−.01	.10	−.06	**.43**	.35	−.10	.34	4.59
Items ⩾ .40 on Factor V only								
23 The first thing a couple should think about when deciding to have children is whether or not they can afford it	.10	.05	−.10	.04	**.59**	.29	.47	5.92
32 Before having a child, a couple should consider whether they would rather use their money for something else	−.08	−.05	.17	.01	**.58**	−.15	.41	3.59
9 A couple ought to think seriously about the inconveniences caused by children before they have any	.09	−.09	.03	.25	**.57**	−.00	.41	4.84

Items ≥ .40 on Factor VI only								
38 It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have	.00	.16	.06	−.11	.02	**.58**	.38	2.52
5 Most married couples would be happier if they did not have any children	.04	.08	−.19	−.13	−.03	**.51**	.33	5.87
11 Considering the pressures from family and friends, a person really doesn't have much choice whether or not to have children	.14	.12	−.08	.21	−.03	**−.47**	.32	3.07
Items < .40 on all factors								
4 It is only with a child that a person can feel completely free to express his love and affection	.32	.17	.09	.10	−.03	−.12	.17	5.64
6 Having children gives a person a special incentive to succeed in life	.39	.25	.07	.10	.10	.36	.37	6.29
14 Having children makes a stronger bond between husband and wife	.32	.06	−.02	−.08	.36	.33	.35	6.02
17 It is the parents' fault if their children are not successful in life	.21	.14	.04	−.04	.07	.28	.15	5.52
20 Life for most people would be pretty dull without children	.28	.08	.39	.13	−.19	.38	.43	6.10
25 One of the best things about having children if the true loyalty they show to their parents	.38	.39	.04	.05	.19	.01	.34	5.78
26 Having children causes many disagreements and problems between husband and wife	.00	.05	−.01	−.39	−.04	.20	.19	4.75
Eigenvalue	18.2	6.2	4.7	3.5	3.4	3.1	39.0	na

NOTE: Possible scores range from 1 (strongly disagree) to 7 (strongly agree). A score of 4 is neutral.

na—not applicable.

The first and largest factor, with 13 items loading at .40 or above, appears to have several components. In one cluster discerned through analysis of the content of the items, the theme appears to be parental self-actualization—i.e., the contribution that children can make to parents before and after death (items 30, 42, 33, 35, 29, 36, and 13). Having children and raising them well increase a person's self-worth and happiness, and may even confer on the parent a sense of immortality. A second set of items (31 and 43) reflects the relationship between family and society. A third cluster (items 24, 28, and 8) expresses a naturalistic view of having children and parental roles. Children are seen as either an inevitable outcome of marriage or a naturally desired end. Although these several components do not lend themselves to easy labeling, we will call Factor I *parental self-actualization and role satisfaction.*

Factor II, with seven high loadings, is concerned with the theme of *children as benefits and obligations to parents, family, and society.* Children provide help to their parents and also continue the family name and traditions. Because of their value to parents and society, having children is both a duty and a virtue.

The six high-loading items in Factor III emphasize the *adult status, morality, and happiness* that parents derive from children. Parenthood makes a person more adult, less likely to behave immorally, more respected in the community, and happier than he or she would otherwise be.

Factor IV, also with six items, is concerned with the *economic and psychological costs of children.* Respondents who scored high on this factor felt constrained by the financial burden of raising children, the opportunity costs they entail, and the emotional problems they create.

Factor V, with three items, is characterized by the *propensity to assess alternatives to childbearing.* All three items suggest that before having children people should consider how children will affect their future lives.

Factor VI is bipolar and most difficult to assign a label to. Two of the three items (38 and 11) suggest that parenthood is almost inevitable; the third (item 5) states that most people would be happier without children. For the sake of convenience, we may describe this factor as *individualistic versus external orientation toward childbearing.*

It should be noted that the six factors accounted for less than half of the total variance, indicating not only that more nonchance factors may be extracted but also that at least some of the six factors were not powerful at all. As a matter of fact, only the first two of the six

factors had high loadings on more than five items and accounted for more than 5 percent of the total variance. Factor I is strongest in the sense that it accounted for almost one-fifth of all variance, which was about three times that accounted for by the next highest factor (II).

Results of the factor analysis for the total sample could serve as a basis for deriving a subgroup scale for each of the six factors. Using the high-loading items as a core, one might add more items to develop a valid scale for each factor. This would be particularly easy to do with Factor I, which already has high loadings on more than 10 items. In the present study, though, no effort has been made to develop a new scale.

The factor structure was found to vary widely among the various subgroups, but the lack of factor equivalence may have resulted from the instability of the correlation matrices, which in turn was due to the small number of respondents in each subgroup relative to the number of attitude items. For this reason, the subgroup factor structures have not been analyzed.

Instead, the 11 items having the highest mean scores (i.e., those in the top quartile) and the 11 items with lowest scores (in the bottom quartile) were derived for each subgroup in order to disclose differences—and similarities—in the importance that the various subgroups placed on the items. Several observations can be made about the relation of these scores, which are presented in Table 3.17, to the factor analysis.

First, five items have mean scores in the top quartile for all five subgroups: 6 (Having children gives a person a special incentive to succeed in life), 8 (It is only natural that a man should want children), 33 (One of the best things about being a parent is the chance to teach children what they should and should not do), 36 (One of the best things about having children is that you are never lonely), and 42 (Having children is a sign of blessing on a marriage). All five items are highly loaded on Factor I (Table 3.16) and, with the exception of item 8, belong to the cluster labelled *parental self-actualization.* Item 36 was considered to be most important by all subgroups except the rural. Two other items in the top quartile belonging to the parental self-actualization cluster—13 (All the efforts a parent makes for his children are worthwhile in the long run) and 30 (A person who has been a good parent can feel completely satisfied with his achievements in life)—scored high in importance among the urban subgroups and women. Two items in the top quartile expressing the societal value of children—31 (The family with children is the basis for all that is good in our society) and 43

Table 3.17 Mean scores of attitude items in top and bottom quartiles, by subgroup

Item	Urban middle	Urban lower	Rural	Female	Male
TOP QUARTILE					
2 A good reason for having children is that they can help when parents are too old to work	na	na	6.5	na	na
3 Raising children is an act of virtue	na	na	6.3	na	na
6 Having children gives a person a special incentive to succeed in life	6.1	6.3	6.4	6.4	6.1
7 It is important to have children so that the family traditions will live on	na	6.7	6.8	6.4	6.3
8 It is only natural that a man should want children	6.1	6.2	6.5	6.2	6.2
13 All the efforts a parent makes for his children are worthwhile in the long run	5.9	6.2	na	6.2	na
14 Having children makes a stronger bond between husband and wife	6.1	na	na	6.2	na
20 Life for most people would be pretty dull without children	5.8	na	6.3	na	6.1
23 The first thing a couple should think about when deciding to have children is whether or not they can afford it	6.0	na	na	na	na
24 For most people it is inevitable to have children	na	na	6.3	na	6.1
28 It is only natural that a woman should want children	6.0	na	6.6	6.2	6.2
30 A person who has been a good parent can feel completely satisfied with his achievements in life	6.0	6.2	na	6.2	na
31 The family with children is the basis for all that is good in our society	na	6.3	na	na	6.1
33 One of the best things about being a parent is the chance to teach children what they should and should not do	5.9	6.5	6.4	6.4	6.1
34 A man has a duty to have children to continue the family name	na	6.5	6.7	6.3	6.2
36 One of the best things about having children is that you are never lonely	6.3	6.8	6.6	6.5	6.4
42 Having children is a sign of blessing on a marriage	6.2	6.2	6.4	6.4	6.1
43 The family with children is the only place in the modern world where a person can feel comfortable and happy	na	6.2	na	na	na

Table 3.17 *(continued)*

Item	Urban middle	Urban lower	Rural	Female	Male
BOTTOM QUARTILE					
1 Caring for children is a tedious and boring job	na	4.6	5.2	4.9	na
2 A good reason for having children is that they can help when parents are too old to work	3.6	na	na	na	na
3 Raising children is an act of virtue	4.2	na	na	na	na
9 A couple ought to think seriously about the inconveniences caused by children before they have any	na	4.2	5.1	4.9	na
10 Always having children around is a great mental strain	3.8	4.4	na	5.1	4.1
11 Considering the pressures from family and friends, a person really doesn't have much choice about whether or not to have children	2.2	3.5	2.9	3.1	3.2
15 One of the highest purposes of life is to have children	4.0	na	na	na	4.6
19 Children limit you in what you want to do and where you want to go	na	na	4.9	na	4.4
21 A young couple is not fully accepted in the community until they have children	3.4	4.8	5.1	4.7	4.2
26 Having children causes many disagreements and problems between husband and wife	2.5	2.3	1.9	2.5	na
27 A person with children is looked up to in the community more than a person without children	4.2	na	na	5.0	4.5
32 Before having a child, a couple should consider whether they would rather use their money for something else	4.0	3.2	3.7	3.8	3.4
38 It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have	2.0	2.8	2.8	2.4	2.6
39 When you have children you have to give up a lot of other things that you enjoy	na	4.7	5.1	na	4.5
41 Before having a child, a couple should consider whether it would interfere with the wife's work or not	na	4.4	4.8	4.7	4.5
44 A person who has no children can never really be happy	3.9	4.7	5.1	4.8	4.3

na—not applicable; mean score not included in top or bottom quartile.

(The family with children is the only place in the modern world where a person can feel comfortable and happy)—received high scores from the urban lower class but not from the other socioeconomic groups.

Second, two items that loaded highly in Factor II, children as benefits and obligations, had high scores among all subgroups except the middle class. They are 7 (It is important to have children so that the family traditions will live on) and 34 (A man has a duty to have children to continue the family name). Item 7 was the highest scoring item for the urban lower-class group. The two highest loading items in Factor II, on the other hand—2 (A good reason for having children is that they can help when parents are too old to work), which expresses an instrumental value of children, and 3 (Raising children is an act of virtue), describing a parental obligation—were considered to be very important to the rural group but not to other subgroups.

Third, none of the items in Factors III, IV, and VI scored in the top quartile for any group. Only one item in Factor V, propensity to assess alternatives to childbearing, received a high mean score, and from only the urban middle class: 23 (The first thing a couple should think about when deciding to have children is whether or not they can afford it).

Thus parental self-actualization appears to be a strong motivation for having children among all VOC subgroups in Taiwan. The importance attached to specific attitude items, however, distinguishes the socioeconomic subgroups. The urban middle class laid greatest stress on the emotional values of companionship from children, their positive contribution to family life and the marriage bond, the incentive that children create for parents to succeed, and the satisfaction that one derives from being a good parent. Although middle-class respondents attached importance to many positive values of children, even stressing that for both men and women it is natural to want children, they were the only subgroup to endorse strongly the view that a couple should consider the financial responsibility of children before starting a family. The urban lower class also stressed the importance of children's companionship, the incentives that children create for parents, and the satisfaction that one feels who has been a good parent; but lower-class respondents also emphasized the importance of having children for the sake of perpetuating family traditions. In contrast, the rural group attached relatively greater importance to having children in order to continue family traditions, moral and social obligations of parenthood, the naturalness of having children, and the security children provide to parents in old age. These differences in value orientation reinforce findings obtained from the open-ended questions.

Only three items that placed in the bottom quartile among all subgroups had generally negative scores (that is, below 4): 11 (Considering the pressures from family and friends, a person really doesn't have much choice about whether or not to have children), 32 (Before having a child, a couple should consider whether they would rather use their money for something else), and 38 (It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have). Respondents seemed resistant to the suggestion that they had no control over their childbearing decisions, or that children could be compared with consumer goods. Item 32 produced puzzled reactions from many respondents, perhaps because it had never occurred to them that a material substitute might be found for children. The low scores on item 11 may mean that social pressures favoring high fertility are beginning to weaken in the communities sampled, particularly among the middle-class and rural groups. The negative reactions to item 38 suggest that family planning would not be objectionable to Chinese respondents, an interpretation borne out by their responses to later questions concerning their attitudes toward birth control (discussed in Chapter 4). It is also possible that some respondents reacted to the strong wording of the statements rather than to the opinions expressed by them.

Two other items scoring in the bottom quartile among all subgroups generally scored on the positive side: 21 (A young couple is not fully accepted in the community until they have children) and 44 (A person who has no children can never really be happy). Both had high loadings in Factor III (adult status, morality, and happiness). In each case, only the middle class disagreed with the statement, whereas the rural group registered the highest (though only slight) level of agreement. All three socioeconomic groups expressed moderate disagreement with item 26 (Having children causes many disagreements and problems between husband and wife).

On several remaining items scoring in the low quartile, the middle class stands in contrast to the other subgroups. It attached relatively less importance to security from children in old age (item 2) and children as one of the highest purposes in life (item 15), relatively more importance to considering the alternatives to children (item 9) and the opportunity cost of children (item 19). These differences accord with the more "modern" values elsewhere expressed by middle-class respondents. The rural group assigned relatively less importance to item 19 (Children limit you in what you want to do and where you want to go) than the other subgroups, probably because rural respondents were more home-centered than the other socioeconomic classes.

Profiles for men and women were in many respects similar, but also showed some interesting differences. Positive values in the top quartile for women, but not for men, include items 13 and 30, dealing with the psychic rewards of parenthood, and item 14, indicating that children strengthen the bond between husband and wife. Items in the top quartile only for men include 20, 24, and 31, dealing with children as a relief from boredom, the inevitability of having children, and the family with children as a moral value. For the bottom quartile, women but not men displayed a distinctively low level of agreement with items on tedium and inconveniences of caring for children (1 and 9) and disagreement with the idea that children cause disagreements between husband and wife (26). Men showed low levels of agreement with an item on children being one of the highest purposes in life (15) and two items on opportunity costs (19 and 39).

Another way of analyzing contrasts in respondents' attitudes toward children is to examine VOC items on which there were statistically significant differences in mean scores between subgroups (Table 3.18). As expected, several traditional values favoring children—help in old age (item 2), a man's duty to continue the family name (item 34), and a person without children can never really be happy (item 44)—revealed significant differences between socioeconomic groups, with mean scores inversely related to status. On other positive or pronatalist statements about children—having children so that family traditions will live on (item 7), life would be dull without children (item 20), teaching children what they should and should not do (item 33), and with children you are never lonely (36)—the middle-class group scored significantly lower than either the lower-class or the rural group. In contrast, negative values tended to distinguish the rural group from the two urban groups. Rural respondents scored significantly higher on the tedium of caring for children (item 1) and the financial burden of children (item 37) but significantly lower on disagreements between spouses caused by children (item 26).

Women scored consistently higher than men on all items, positive and negative, showing statistically significant differences. On the one hand they gave relatively more importance to help in old age, incentives created by children, the chance to teach children moral values, and happiness caused by children; on the other they also stressed more than men the opportunity and financial costs of children and the frictions children cause between spouses.

Table 3.18 Mean scores on selected attitude items toward childbearing and significance levels, by subgroup

Item	Mean score					Significance level by t-test			
	Urban middle	Urban lower	Rural	Female	Male	Urban middle and urban lower	Urban lower and rural	Urban middle and rural	Female and male
POSITIVE VALUES									
2 Children can help when parents are too old to work	3.65	5.28	6.44	5.47	4.78	*	*	*	*
6 Having children gives one a special incentive to succeed in life	6.13	6.30	6.43	6.44	6.13	ns	ns	*	*
7 It is important to have children so that family traditions will live on	5.52	6.65	6.78	6.36	6.27	*	ns	*	ns
14 Having children makes a stronger bond between spouses	6.14	6.01	5.92	6.16	5.88	ns	ns	ns	†
20 Life for most people would be pretty dull without children	5.84	6.14	6.33	6.13	6.08	†	ns	*	ns
33 One of the best things about being a parent is the chance to teach children what they should and should not do	5.92	6.52	6.38	6.40	6.14	*	ns	*	†
34 A man has a duty to have children to continue family name	5.54	6.48	6.73	6.28	6.22	*	*	*	ns
36 One of the best things about having children is that you are never lonely	6.25	6.58	6.56	6.50	6.42	*	ns	*	ns

Table 3.18 *(continued)*

Item	Mean score					Significance level by t-test			
	Urban middle	Urban lower	Rural	Female	Male	Urban middle and urban lower	Urban lower and rural	Urban middle and rural	Female and male
POSITIVE VALUES *(continued)*									
44 A person who has no children can never really be happy	3.87	4.65	5.14	4.77	4.33	*	†	*	†
NEGATIVE VALUES									
1 Caring for children is a tedious and boring job	4.56	4.55	5.24	4.94	4.63	ns	*	*	ns
19 Children limit you in what you want to do and where you want to go	4.63	4.75	4.89	5.13	4.38	ns	ns	ns	*
26 Having children causes many disagreements and problems between spouses	3.51	3.31	2.92	3.53	2.96	ns	ns	*	*
37 Raising children is a heavy financial burden for most people	5.31	5.60	6.21	5.89	5.52	ns	*	*	†
39 When you have children, you have to give up a lot of other things you enjoy	4.90	4.73	5.11	5.35	4.48	ns	ns	ns	*

ns—not significant.

† Significant at .05 level.

* Significant at .01 level.

Economic benefits and costs of children

There is considerable evidence from many countries that as economic status improves, the economic utility of children declines and the economic costs of children increase. One objective of the VOC Study was to explore the relationship between socioeconomic status and the economic values, both positive and negative, ascribed by respondents to children. Another was to learn whether respondents thought any changes were occurring in the economic values of children and, if so, what they thought about them. If children were perceived to entail increasing economic costs and diminishing economic utility, this finding would have implications for population policy.

Respondents were asked what kinds of economic or practical help they expected to receive from their sons and daughters, either while the children were growing up or after they became adults. They were also asked about the kinds of financial support they expected to have in their old age, whether they expected to receive money from their children or live with them when the children were grown, whether children in general were more or less willing nowadays to support or assist their parents in various ways, and whether having many children makes a family better or worse off economically. Finally, they were asked how heavy a burden it would be for them to raise different numbers of children and how much money they thought they had spent on their children during the past twelve months.

Expected benefits from sons and daughters

The kinds of benefits expected from sons and daughters and the percentages of respondents who mentioned them are presented in Tables 3.19 and 3.20. Sixty-nine percent of the sample said they did expect some form of economic or practical help from their sons, compared with 36 percent who expected such help from their daughters. Expecting help from sons was strongly and inversely associated with socioeconomic status—90 percent of rural respondents, 77 percent of the lower class, and only 40 percent of the middle-class group giving an affirmative response. Somewhat more women than men (73 and 65 percent respectively) expected help from sons. The same relationship was found between expecting help from daughters and both socioeconomic status and sex, but differences between subgroups were less pronounced. Fifty-one percent of the rural group expected help from their daughters, whereas only 35 percent of the lower class and 22 percent of the middle class expected such help. Among women the proportion expecting help from daughters was 42 percent; among men, 30 percent.

Table 3.19 Expected benefits from sons

(Percentage of respondents who mentioned specified benefits, by subgroup)

Benefit	Urban middle	Urban lower	Rural	Female	Male	All respondents
Economic help (old age not mentioned)	33	31	47	44	32	39
Economic help in old age	14	21	25	26	16	21
Help in family business, farm	21	17	14	10	23	16
Sharing of financial responsibility; insurance, security	5	21	11	8	21	14
Comfort, care (old age not mentioned)	32	3	11	15	9	12
Pride in children's accomplishments	2	13	11	6	16	10
Help in housework, family chores; practical help	5	13	6	3	14	8
Unspecified help (old age not mentioned)	2	8	4	8	1	5
Companionship, comfort, care in old age	4	8	0	5	2	4
Unspecified help in old age	2	5	4	3	5	4
Number of respondents	57	112	132	160	141	301

Substantial percentages of those expecting help from sons expected economic help (both in general and in old age), help in the family business or farm, and financial security (Table 3.19). Somewhat fewer respondents mentioned noneconomic expectations of comfort and care, and the pride they could take in their sons' accomplishments; and a few mentioned practical help around the house and companionship or care in old age. With reference to daughters, respondents laid relatively greater stress on practical and emotional forms of support, and less emphasis on economic and financial help, especially in the parents' old age (Table 3.20). Help in the home was the most frequently mentioned expectation from daughters, followed by general economic help and by comfort and care. Only a few respondents mentioned pride in

Table 3.20 Expected benefits from daughters
(Percentage of respondents who mentioned specified benefits, by subgroup)

Benefit	Urban middle	Urban lower	Rural	Female	Male	All respondents
Help in housework, family chores; practical help	36	50	37	28	60	41
Economic help (old age not mentioned)	52	21	34	31	37	27
Comfort, care (old age not mentioned)	48	19	11	26	14	21
Sharing of financial responsibility; insurance, security	3	12	16	11	14	12
Unspecified help (old age not mentioned)	0	8	5	8	2	5
Companionship, comfort, care in old age	3	4	3	4	2	3
Economic help in old age	3	2	4	6	0	3
Help in taking care of other children	3	2	1	0	5	2
Pride in children's accomplishments	0	4	1	2	2	2
Self-reliance of children	3	2	0	0	3	1
Number of respondents	31	52	73	91	65	156

daughters' accomplishments, and help in the family business or farm does not appear at all for daughters. These differences in expectations from sons and daughters are generally consistent with the kinds of reasons respondents had earlier offered for wanting sons and daughters (Tables 3.5 and 3.6) and with the roles traditionally assigned to sons and daughters in Chinese families.

The main utility function of daughters, practical help around the home, is most useful to parents before the daughters marry. During her youth a daughter is expected to contribute to housework and chores, while a son may be excused from such responsibilities so that he may pursue his studies or do other things considered to be of more importance to the parents. The major utility of daughters in a Chinese family is thus auxiliary and temporary, whereas the main utility func-

tion of sons, which is economic, is deferred until the sons are self-supporting. Even the economic utility of daughters to parents in later years tends to take the form of personal service or labor rather than financial assistance. On the other hand, daughters are expected more than sons to provide the long-term benefit of comfort and care to parents.

As expected, rural respondents mentioned general economic help and economic help in old age from sons more often than urban respondents; these two forms of utility were also more salient to women than to men (Table 3.18). As a utility expected from sons, help in the family business or farm is positively associated with socioeconomic status, although as a reason for wanting sons (Table 3.6) it has a slight negative association. These two findings are not necessarily in conflict, for parents may expect certain benefits from children and yet want the children for other reasons. Besides, the absolute frequency with which help in the family business or farm was mentioned was greater among the lower-class and rural groups than among the middle class (Table 3.19). That relatively more men than women expected help from sons in the family business or farm is not surprising, since the men would be relying on the help more than the women.

The urban lower class mentioned more often than the middle-class and rural groups sons' being able to share financial responsibility for the family—although in naming reasons for wanting sons (Table 3.6), more rural than urban respondents had mentioned this expectation. Again, the apparent inconsistency may be due to the way the questions were phrased and the different sample bases. Sharing of financial responsibility was also mentioned with far greater frequency by men than by women.

Comfort and care from sons were more salient to the middle class and women than to the other subgroups, and for the middle class ranked second only to general economic help as the most salient form of expected help. Because it fulfills psychic, rather than economic, needs, comfort and care may be considered a "modern" utility.

The expectation of taking pride in sons' accomplishments and of help from sons around the home were mentioned with greater frequency by lower-class respondents and men than by either of the other two socioeconomic groups or women, and with least frequency by the middle class. Lower-class parents may have seen their sons as an avenue of upward mobility, though they had lower educational aspirations for their children than middle-class or rural respondents. Identification by fathers with their sons' accomplishments is a common phenomenon in Taiwan as elsewhere.

Several differences between subgroups in their expectations from daughters are striking and suggest that the functions of daughters may be changing in Taiwan, at least among the middle class (Table 3.20). A much larger proportion of middle-class respondents than of the rural and lower-class groups mentioned general economic help and comfort and care from daughters; in fact, relatively more middle-class respondents (52 percent) cited economic help from daughters than mentioned economic help from sons (33 percent)—though because of the larger sample base the absolute number of middle-class respondents mentioning economic help from sons was greater. This emphasis by the middle-class group on the economic utility of daughters probably reflects growing occupational opportunities for educated women in Taiwan. Proportionately more middle-class than lower-class or rural respondents also mentioned the noneconomic reward of comfort and care from daughters. Men stressed the economic and especially the practical utility of daughters, whereas women placed relatively more emphasis on the psychological utility of comfort and care they expected from daughters.

As with sons, expected utility from daughters was not necessarily a reason for wanting them. Although a greater percentage of lower-class than of rural or middle-class respondents said they expected daughters to provide help with housework, more rural respondents mentioned wanting daughters for this reason.

Among the socioeconomic groups, lower-class respondents cited the traditional value of help in housework and family chores relatively more frequently than did middle-class or rural respondents. It is possible that they depended on daughters for such services to a greater extent than the other groups because they were less able to afford hired domestic help than the middle class and, unlike rural respondents, could not turn to members of an extended family for help around the home.

Expecting daughters to share financial responsibility and provide insurance and security to parents is inversely associated with socioeconomic status. This finding appears to be in conflict with the high percentage of middle-class respondents who mentioned expecting economic help from daughters. Because more office jobs are becoming available for educated city women, daughters of urban middle-class families have more opportunities to provide economic help to their parents than do those from the urban lower class and rural areas, and this change in job structure may have led middle-class respondents to anticipate receiving some financial assistance from their unmarried

daughters. While recognizing the increasing economic contribution unmarried daughters can make to their family of origin, however, it is likely that most middle-class respondents did not foresee depending on their daughters for economic security after the daughters married, since the daughters' obligations would then be transferred to their husbands. Not only did the middle class have less need than the other groups for such support, but also social pressures ruled against it.

The general pattern that emerges from Table 3.20, then, is that parents (particularly fathers) viewed daughters as having their greatest practical and economic utility before marriage, and for fathers these functions were paramount. The comfort and care that daughters were also expected to provide probably represent a longer-term utility, and were especially salient to mothers.

Indices of economic utility and disutility

Five indices of the perceived economic benefits and costs of children were constructed from responses to open-ended and structured questions. A full explanation of how the indices were derived is given in Appendix B of Arnold et al. (1975). Mean scores on the indices are presented for Taiwan in Table 3.21.

Looking at the mean scores for the total sample, it is apparent that Chinese respondents saw children as providing economic benefits but entailing a substantial economic burden as well. They also perceived the economic utility of children as having declined slightly in recent years. All of the indices show the expected relationship between socioeconomic status and degree of perceived benefit or cost. Expected economic help and expected assistance from children in old age are highest among rural respondents and lowest among the middle class. Similarly, the economic burden of desired family size and economic costs of children are negatively related to socioeconomic status. Middle-class respondents saw the utility of children as having declined somewhat since they themselves had been children, but the other two groups regarded it as unchanged. Women scored slightly higher than men on all indices.

Perceived costs of raising children

VOC investigators were interested in learning whether respondents had a clear idea of how much money they spent on their children and, if so, what the amount was over a given period of time. In pretests conducted in Hawaii, respondents were asked to estimate the cost of raising a child from birth through high school and the percentage of their

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Table 3.21 Perceived economic benefits and costs of children
(Mean scores on combined indices of perceived value, by subgroup)

Index	Urban middle	Urban lower	Rural	Female	Male	All respondents
Expected economic help from children[a]	6.5	10.3	12.8	10.9	8.9	9.9
Expected assistance from children when parents are too old to work[b]	3.9	5.3	6.5	5.6	4.8	5.2
Perceived change in the utility of children[c]	7.7	6.4	6.4	7.0	6.6	6.8
Economic burden of desired family size[d]	2.3	3.0	3.2	2.9	2.7	2.8
Economic costs of children[e]	8.4	10.2	11.2	10.2	9.6	9.9

a Possible scores range from 0 (no help expected) to 17 (a great deal of help expected). This index includes expected help from sons, expected help from daughters, expected help in old age, wanting to have another child for help in old age, wanting to have another child to help the family economically, and VOC item 2 (A good reason for having children is that they can help when parents are too old to work).

b Possible scores range from 1 (strongly disagree) to 7 (strongly agree). The index is based on coded responses to VOC item 2.

c Possible scores range from 1 (utility has greatly increased) to 13 (utility has greatly decreased). The index includes degree to which respondents perceived children nowadays as willing to live with their parents after they marry, to give part of their wages to their parents when they start earning, to support their parents in old age, and to help with chores around the house, farm, or family business.

d Possible scores range from 1 (no burden) to 4 (heavy burden). Index is based on expected burden of raising desired number of children.

e Possible scores range from 1 (little cost) to 15 (great cost). This combined index includes expected economic burden of raising desired number of children, the total number of children wanted, not wanting another child because of the financial burden to family, the financial burden of raising specified numbers of children, and the financial burden of providing an education for children.

income they spent on their children. Many parents were unable to hazard even a guess, and those who did often gave unrealistic answers. In the final version of the core questionnaire, therefore, the question on costs was modified as follows: "About how much money in all do you think it has cost you to raise your children over the last twelve months?" Ninety-four percent of the Taiwan respondents were able to

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Table 3.22 Estimated monetary amounts spent on children per annum, by socioeconomic group

Item	Urban middle	Urban lower	Rural	All groups
Annual mean family income	75,521	44,160	24.923	48,255
Average amount spent on all children per year	18,900	17,090	13,780	16,590
Mean number of children	2.2	2.9	2.8	2.6
Percentage of annual mean family income spent on children	25	39	55	34
Percentage of annual mean family income spent per child	11	13	20	13
Average amount spent per child per year	8,552	5,934	5,011	6,356

NOTE: Monetary values expressed in New Taiwan Dollars (NT$). One NT$ = US$0.026.

answer the question. Although their estimates may not be very accurate, they do indicate respondents' perceptions of the monetary costs of their children. The estimates are presented in Table 3.22.

The average estimated amount spent per year on all children was NT$16,590 (US$431), or 34 percent of the average family income. Since the average number of children per family was 2.6, average estimated amount spent per child was NT$6,356 (US$165). The amount spent on children was highest for the middle class and lowest for the rural group, but because family incomes were also highest for the middle class and lowest for the rural group, the percentage of total income spent on children was inversely related to socioeconomic status. The middle class estimated spending 25 percent of their annual income on children, on the average, compared with 39 percent estimated by the lower class and 55 percent estimated by the rural group.

Middle-class respondents had smaller families and more income, on the average, than the lower-class and rural groups, and these differences account for the lower percentage of annual income spent per child by the middle class (11 percent, compared with 13 percent spent by the lower class and 20 percent spent by the rural group). Actual dollar amounts that respondents estimated spending per child were highest for the middle class and lowest for the rural group. Thus the middle class, while spending more money per child than the other two groups, had a larger portion of total income left over for other uses.

The amounts respondents estimated spending on their children rep-

resent, especially in the case of the rural group, substantial portions of their total income, and it is likely that child-related expenses for these parents will increase as the children become older. Even if the estimates are exaggerated, they demonstrate that lower-class and rural respondents perceived the economic burden of their children to be considerable. The policy implications of this and other findings presented in this chapter will be discussed in Chapter 6.

4

family size and family planning

The previous chapter focused on the social, psychological, and economic values—positive and negative—that Taiwanese parents ascribed to children. These values were analyzed in relation to the desire for another child and the desire for a certain number of children, as well as in relation to the desire for having children in general. The evidence reviewed thus far suggests a meaningful relationship between perceptions of the value of children and family size. This chapter presents a variety of information about family-size preferences, birth spacing, and family planning knowledge, attitudes and practice, for male and female respondents belonging to the three social classes included in our sample. This descriptive information provides background for the correlational and regression analyses presented in Chapter 5, where an attempt is made to show the total pattern of relationships among background and situational factors, the value and cost of children, and family size and family planning.

Family-size preferences

Family-size desires have been studied extensively in KAP surveys and are often regarded as an indicator of ultimate family size, although considerable evidence has been amassed showing that other factors besides expressed desires influence actual fertility levels. The present study is not concerned with the use of family-size desires in predicting completed family size. Rather, it is aimed at discovering the relation-

ship between family-size desires and the context – social and psychological – in which parents' attitudes toward family size are formed. To accomplish this objective, the questionnaire sought information not only about respondents' actual, ideal, and wanted family size, but also about "typical" family size in the community and respondents' perceptions of what constituted a "small" and a "large" family. Throughout the discussion that follows family size refers to the number of children in a family and "actual family size" indicates the number of living children (with a current pregnancy treated as an additional living child).[1]

Ideal family size was measured within the context of a hypothetical situation. Respondents were asked what their family-size preference would be if they had just married and did not yet have any children. Total number of children wanted was ascertained not by asking a direct question but by summing number of living children (actual family size) and number of additional children wanted. For respondents who wanted more children (25 percent of the sample), number of additional children wanted was derived from answers to the question "If you could have just what you want, how many more children would you like to have?" To measure typical family size the survey included the question "About how many children do you think a typical couple in this community has by the time they stop having children?" Finally, respondents were asked how many children constitute a small family, and how many a large family. Differences between these six measures of family-size perception are shown in Table 4.1, which also shows the size of the respondent's family of orientation.

At the time of the interviews, respondents in our sample had an average of 2.6 children. Middle-class parents had a lower average parity (2.2 children) than the lower-class and rural groups, who had nearly identical numbers of living children (2.9 and 2.8, respectively). As suggested earlier, this difference between the socioeconomic groups may have reflected in part different stages of family formation, middle-class respondents having married at later ages on the average than the other two groups. The other measures presented in Table 4.1, however, show that middle-class respondents actually desired smaller families. Total number of children wanted was 2.7 for the middle class, compared with 3.3 and 3.4 respectively for the lower-class and rural respondents. Similarly, ideal number of children was lower for the

1 The term "parity" is used interchangeably with number of living children. Technically, however, parity refers to the number of children, living and dead, a woman has ever borne.

Table 4.1 Selected measures of family size, by subgroup

Measure	Urban middle	Urban low	Rural	Female	Male	All respondents
Mean number of living children	2.2	2.9	2.8	2.6	2.6	2.6
Mean number of children wanted[a]	2.7	3.3	3.4	3.1	3.1	3.1
Mean number of children ideal[b]	2.6	3.1	3.3	2.9	3.1	3.0
Mean estimated number of children in "typical" family in community	3.3	3.3	3.6	3.4	3.4	3.4
Mean estimated number of children in "small" family	2.5	2.7	2.5	2.7	2.5	2.6
Mean estimated number of children in "large" family	5.0	5.4	5.5	5.5	5.1	5.3
Mean number of children in respondent's family of orientation	5.8	5.6	6.3	5.7	6.1	5.9

a Number of living children plus number of additional children wanted.

b Number of children respondents would want to have if they were starting their families again.

middle class (2.6) than for the other two groups (3.1 and 3.3 respectively).

The mean number of children wanted was slightly higher than the mean ideal number of children for all three socioeconomic groups. Two interpretations of this finding may be hypothesized. First, since the number of children wanted included by definition all living children, and since a majority (68 percent) of respondents said they did not want additional children, it is possible that some respondents had already exceeded their ideal family size, either because of birth control failure or because their ideal had changed since they became parents. Sample surveys of married women aged 22–39, conducted in Taiwan over the period 1965–1972, indicate a decline from 4.0 to 3.2 in the preferred number of children (Freedman et al., 1974: table 7). And respondents in the VOC sample came from families that were, on the average, twice the size of the families they desired for themselves. It is likely, then, that as part of an overall shift in societal norms some respondents had revised their family-size preferences downward since

becoming parents. Second, we already know that some respondents wanted additional children because they desired more sons or wished to have a particular combination of sons and daughters (Table 3.11). If those parents had been able to predetermine the sex of children already born their ideal and wanted family sizes might have coincided. Thus some parents may have overshot their ideal family size in order to obtain a desired family composition.

The differences between number wanted and ideal number are small, however, especially for the middle-class and rural groups. If respondents in the Taiwan sample succeed in achieving their wanted number, it will represent a remarkable decline in fertility in just one generation. Considering that Taiwan's total fertility rate declined from 5.6 to 3.4 over the period 1961–1972 (Freedman et al., 1974: table 1), it seems certain that completed family size among VOC respondents will be closer to their wanted family size than to the size of their families of orientation.

How close it is depends on whether those respondents who did not want additional children can make an independent decision concerning their family composition. In many Chinese families, a couple's decision must conform to the parents' wishes. For example, the year 1976 is a dragon year in the Chinese lunar calendar, symbolizing prosperity and elegance. According to tradition, the year of the dragon is particularly auspicious for bearing sons, and among older Chinese this belief is still strong. The Taiwan vital registration office has warned several times that the birth rate has risen drastically since the beginning of the year.

The VOC sample perceived a "typical" couple in the community to have an average of 0.8 more children than the respondents had at the time of the survey. Since a "typical" family was a typical completed family, it is appropriate to compare "typical" family size with respondents' wanted family size. Respondents wanted only 0.3 fewer children, on the average, than a "typical" couple had. If typical family size is viewed as a measure of the community norm, then the Taiwan sample as a whole appears to have been fairly representative of the areas surveyed. But there are subgroup differences. A "typical" family was slightly smaller (3.3 children) for the two urban groups than for the rural group (3.6). And whereas there was no difference between wanted and "typical" family size for the lower class and a mean difference of only 0.2 children for the rural group, the middle class wanted 0.6 fewer children on the average than they perceived the typical couple in their community to have. Because middle-class respon-

dents were generally better educated and presumably more modernized than the other two groups, it is not surprising that they expressed greater independence from the perceived community norm than did the other two groups.

There was little variation among socioeconomic subgroups in their perceptions of "small" family size (2.6 children for the total sample), but the number of children in a "large" family was more diverse, ranging from 5.0 for the middle class to 5.5 for the rural group. All three groups wanted families tending toward the "small" size, the middle class approximating its small-family norm most closely, the rural group showing the greatest divergence. Middle-class, lower-class, and rural respondents wanted to have at least two fewer children, on the average, than were characteristic of a "large" family. It may be inferred that respondents in all three groups considered their families of orientation to have been large. Even the concept of what constitutes family size has undergone a change in recent years. Before the period of rapid industrial development and social change that began a generation ago, a large family not only had more children than a small family, but also had three generations living together.

Differences between female and male respondents on the measures presented in Table 4.1 are negligible, with three exceptions. The men's families of orientation were 0.4 children larger, on the average, than the women's. Although men and women wanted the same number of children (3.1) in their completed families, and for men there was no difference between wanted and ideal number of children, for women the ideal number was smaller (2.9). Among women in the sample, therefore, a change in family-size preferences may have occurred, possibly as a result of having children; or the women's original preferences may have been for smaller families but for various reasons—failure to plan, contraceptive failure, desire of spouse, desire for children of a particular sex, social pressures, fatalism—they had exceeded their ideal. Finally, the mean number of children in a "large" family was larger for women (5.5) than for men (5.1).

Table 4.2 compares the various family-size measures, showing the percentage distribution of respondents in each subgroup according to whether they viewed one measure as less than, equal to, or greater than another. Roughly half of the total sample and of each subgroup (47–51 percent) wanted the same number of children that they considered to be ideal. Whether the majority of these respondents were hoping to achieve or had actually achieved their ideal, or whether—given that many of them did not want more children—they had ra-

tionalized their ideal to conform with the number of children they already had, is impossible to say on the basis of these figures. The rather high rates of contraceptive use reported by respondents (discussed below) suggest that efforts had been made to bring ideal and total family size into conformity. Roughly a quarter (21–26 percent) of respondents wanted more children than the number they considered ideal, however, and smaller proportions (15–19 percent) wanted fewer than the ideal number. Eleven percent of the sample did not know what their ideal, or wanted, number was.

Differences between subgroups are greater for the comparison between number of children wanted and number in a "typical" family. Slightly more than a third (36 percent) of the total sample wanted fewer children than they perceived the typical couple in their community to have, and just under a third (32 percent) wanted to have a family of "typical" size. But whereas 45 percent of the middle class wanted smaller than "typical" families, only 34 percent of the rural group and 29 percent of the lower class had this preference. More rural and lower-class respondents (39 and 31 percent respectively) than of middle-class respondents (26 percent) wanted families of "typical" size. Smaller proportions of all three groups wanted larger than "typical" families, the percentages ranging from 12 for the middle class to 21 for the lower class. Thus not only was a typical family perceived as being smaller by middle-class respondents than by the other two socioeconomic groups (Table 4.1), but also more middle-class respondents preferred to fall short of that norm, and fewer to exceed it, than was the case with the rural and lower-class respondents. This finding is not surprising, in view of widespread evidence that fertility decline generally begins among better educated and more affluent couples. What is somewhat surprising is that rural VOC couples, although having a slightly larger "typical" family-size norm than the lower class (3.6 children, compared with 3.3), were more inclined than the lower class to want a smaller than "typical" family and less inclined to want a larger than "typical" family. This finding could mean that fertility norms are undergoing a rapid decline in rural Taiwan, possibly owing in part to the national family planning program. It should also be noted that rather large percentages of lower-class and middle-class respondents did not know what family size was "typical" of their communities—which suggests either that there was less uniformity in family size in the urban areas sampled than in the rural community, or that there was less social interaction. Differences between male and female respondents on this comparison were small, 3 percent more women than

Table 4.2 Differences between selected family-size measures
(Percentage distribution of respondents)

Difference	Urban middle	Urban lower	Rural	Female	Male	All respondents
Between total number wanted and ideal number						
Number wanted less than ideal number	15	17	19	18	17	17
Number wanted same as ideal number	48	50	48	47	51	49
Number wanted greater than ideal number	26	23	22	26	21	24
Don't know, up to God	10	10	12	10	12	11
Total	99	100	101	101	101	101
Between total number wanted and number in "typical" family						
Number wanted less than number in "typical" family	45	29	34	37	35	36
Number wanted equal to number in "typical" family	26	31	39	32	31	32
Number wanted greater than number in "typical" family	12	21	15	16	16	16
Don't know, up to God	17	19	12	15	18	16
Total	100	100	100	100	100	100
Between ideal number and number in "typical" family						
Ideal number less than number in "typical" family	54	26	36	38	39	39
Ideal number equal to number in "typical" family	30	49	51	43	43	43

Ideal number greater than number in "typical" family	3	12	7	8	7	7
Don't know, up to God	13	14	4	11	12	11
Total	100	101	98	100	101	100
Between total number wanted and number in "small" or "large" family						
Number wanted less than or equal to number in "small" family	65	56	44	53	57	55
Number wanted less than number in "large" family but more than number in "small" family	18	22	31	23	23	23
Number wanted equal to or greater than number in "large" family	10	15	17	17	11	14
Don't know, up to God	8	8	8	7	9	8
Total	100	100	100	100	100	100
Between ideal number and number in "small" or "large" family						
Ideal number less than or equal to number in "small" family	80	60	53	62	67	64
Ideal number less than number in "large" family but greater than number in "small" family	13	27	34	25	24	25
Ideal number equal to or greater than number in "large" family	7	12	12	12	8	10
Don't know, up to God	0	1	1	1	1	1
Total	100	100	100	100	100	100

NOTE: Percentages may not sum to 100 because of rounding.

men wanting fewer than or as many children as were "typical," and 3 percent more men than women not being able to make the comparison.

Response patterns for the comparison between ideal and "typical" family size are similar to those for the wanted and "typical" family-size comparison, and again differentiate the middle class from the other two socioeconomic groups. Approximately half of the lower-class and rural respondents had family-size ideals that were "typical" of their communities, compared with 30 percent of the middle class. Slightly more than half (54 percent) of the middle class idealized a smaller number of children than they considered to be typical, whereas for the lower-class and rural groups the percentages were 26 and 36 respectively. Among all three groups only small proportions of respondents (ranging from 3 percent for the middle class to 12 percent for the lower class) idealized a larger than "typical" family size.

The last two comparisons in Table 4.2, which relate wanted and ideal family sizes with the number of children in "large" and "small" families, provide evidence that most respondents in the VOC sample, especially the urban respondents, had adopted what they viewed as a small-family norm. Just over half (55 percent) of the total sample wanted the same number or fewer than the number of children in a "small" family. The proportion of respondents expressing this preference was higher among the urban middle and lower classes (65 and 56 percent respectively) than among the rural group. Nearly a fourth (23 percent) of all respondents wanted a completed family that was larger than a "small" family but smaller than a "large" family; in this case the percentages were inversely related to socioeconomic status. As expected, smaller percentages of respondents in all three groups wanted a completed family equal to or larger than a "large" family, the proportion again being inversely associated with status. Slightly more men than women wanted "small" families, and slightly more women than men wanted "large" ones. The response patterns for the comparison between ideal family size and "small" or "large" family are similar. A large majority of respondents in all subgroups idealized a number equal to or smaller than a "small" family (the percentages ranging from 80 among the middle class to 53 among rural respondents). Roughly the same proportions idealized a family size between "small" and "large" as wanted that family size, and rather small percentages of respondents had an ideal equal to or larger than a "large" family, the smallest percentages being among the middle class and men.

Birth spacing and birth control

The family-size preferences analyzed above should have had bearing on the timing of births and family planning experience of VOC respondents. To explore the relationship between these preferences and actual fertility behavior the VOC questionnaire included questions about date of marriage, age at marriage, birthdates of children, and birth control knowledge, attitudes, and practice.

Table 4.3 shows that for the entire sample the average interval between marriage and first birth was just over a year; between the first and second births, nearly two years; and, among those who had three children, two years and three months between the second and third births. Most first births were concentrated in the first two years of marriage. Forty-one percent of the sample had had a second child between one and two years following the first birth, but 34 percent had delayed the second birth by at least two years, and nearly a quarter had not yet borne a second child. More than half of the couples (55 percent) had not yet had a third child, but among those who had, the third birth usually took place between one and three years following the second.

The concentration of first births in the first two years of marriage is probably due in large measure to pronatalist pressures that newlywed couples in Taiwan are exposed to by parents, other relatives, and friends. Having a child soon after marriage is a traditional expectation, particularly on the part of the couple's parents, that approaches a duty. Because it is the first child who has the greatest impact on a couple's activities, by reducing the wife's opportunity to pursue other interests such as higher education or a career, and making it harder for the couple to improve their economic situation, this expectation represents a major obstacle to more rational family formation—and of course to the decision, still rare among Chinese couples, to have a childless marriage.

Another reason for the shorter interval between marriage and first birth is lack of knowledge about birth control among newly married couples. Not only do parents avoid discussing the subject with their children, but even school teachers are prohibited from including information about birth control in their lectures. The government now permits the general topic of family planning to be discussed in classrooms, but not specific methods; yet public opinion is even opposed to this conservative approach to sex education.

After the first child is born the parental and social expectation is

Table 4.3 Birth intervals
(Percentage distribution of respondents, by socio-economic group)

Interval	Urban middle	Urban lower	Rural	All groups
Between marriage and first birth				
Birth before marriage	2	13	12	9
0–11 months	53	42	33	43
12–23 months	36	24	38	33
24–35 months	3	9	2	5
36–47 months	4	1	4	3
48–59 months	0	0	1	1
60–85 months	1	1	3	2
Not applicable[a]	1	9	7	5
Total	100	99	100	101
Mean interval (in months)	14.3	9.7	13.7	12.6
Between first and second births				
0–11 months	4	3	3	3
12–23 months	46	45	31	41
24–35 months	16	31	31	26
36–47 months	3	6	6	5
48–59 months	0	0	6	2
60–85 months	0	1	1	1
Not applicable[a]	31	15	24	23
Total	100	101	102	101
Mean interval (in months)	20.1	23.4	26.4	23.4
Between second and third births				
0–11 months	0	0	1	1
12–23 months	15	27	17	20
24–35 months	14	19	21	18
36–47 months	3	4	6	4
48–59 months	1	0	4	2
60–85 months	0	1	1	1
Not applicable[a]	67	48	50	55
Total	101	99	100	101
Mean interval (in months)	26.6	25.6	28.8	27.0

NOTE: Percentages may not sum to 100 because of rounding.

a Respondents gave no response, had not achieved specified parity, or had married more than once.

satisfied and couples are freer to postpone subsequent births. Among VOC respondents, the total number of children wanted was by traditional standards low (three on the average), and as most of the women had married in their early twenties it is not surprising that subsequent birth intervals were longer than the first.

Some interesting differences in family-formation patterns emerge when subgroups are compared (Table 4.3). Among all couples first births were concentrated in the first two years of marriage, but among lower-class and rural couples there were also a substantial number of premarital births. Several explanations may account for these premarital births. One is that lower-class and rural respondents had less knowledge about and more limited access to contraceptive methods than the middle class. Another is related to the custom, prevalent among lower-class and rural families, of adopting a daughter of their son's age when both children are young, with the expectation that the two will eventually marry. Such adoptions are arranged because parents believe it is easier to discipline a daughter-in-law whom they have raised than one raised by another family. Sometimes the proximity of the intended bride and bridegroom leads to premarital sexual activity. Moreover, there may be a delay in the official registration of the marriage after the wedding has been announced to the family. Usually the wedding announcement is more important to the family than the official registration.

Second-birth intervals were longest among the rural group and shortest among the middle class, although more middle-class than rural or lower-class couples had not yet borne a second child. (Middle-class couples often prefer to concentrate their births in a few span of years so that the mother can develop her career.) Among all three groups the majority of second births were concentrated in the one to three years following the first birth, but a fourth of the rural group and nearly a third of the middle class have been classified in the "inapplicable" category, in most cases because the couples had not been married long enough to have a second child or because they had not borne a second child in up to seven years after the first birth. Since rural respondents had been married longer than the other two groups (having married at age 20.7 on the average), it appears that most of those who had not yet borne a second child had postponed the second birth. Middle-class respondents, on the other hand, had married at later ages (24.3 on the average), been married for shorter periods, and therefore had had less time to bear a second child.

The data on birth intervals in Table 4.3 provide indirect evidence

that VOC respondents in all three socioeconomic groups were aware of and had employed measures to control their fertility. Table 4.4 presents direct evidence that a sizable majority of respondents knew about contraception, approved of it, and had used it. As expected, contraceptive knowledge and experience were directly correlated with socioeconomic status.

Only 1 percent of middle-class respondents had never heard of birth control or family planning, compared with 6 percent of the lower class and 22 percent of the rural group. The rural group's comparative ignorance of this topic may partly explain the incidence of premarital births among rural respondents—though only partly, for the incidence of premarital births was slightly higher among lower-class respondents (Table 4.3). Respondents who had never heard of birth control were not asked subsequent questions about contraceptive methods. Among those who *had* heard of birth control, the majority (70 percent) had practiced contraception. Eighty-five percent of the middle class were currently using or had ever used a method, compared with 71 percent of the lower class and 58 percent of the rural group.

Respondents were shown a list of eight methods and asked of each whether they had heard of it, knew how it was used, and had ever used it. A positive association was found between socioeconomic status and mean number of methods respondents were familiar with. The middle-class group had heard of 7.1 methods and actually used 1.8 methods, on the average, lower-class respondents had heard of 5.9 methods and used 1.1, and the rural group had heard of 4.3 methods and used 1.0. Knowledge and use also appear to have been greater among men than among women, though some of the difference may be due to response error.

Of the eight contraceptive methods listed in the questionnaire, four had been used by substantial numbers of VOC respondents: the intrauterine device (IUD), pill, rhythm method, and condom. The IUD was most popular, mentioned by approximately half of the urban respondents and 35 percent of the rural. This finding is consistent with the fact that the IUD was the most widely accepted method in the Taiwan national family planning program in 1972 and a popular method among nonprogram contraceptors (Yen et al., 1973:119). Nearly a quarter of the sample had used orals or the rhythm method, the middle class having had relatively more experience with rhythm, the lower-class and rural groups relatively more experience with the pill. Orals were first offered by the national family planning program in 1967 to women unable to use the IUD, and in 1969 the program made them

Table 4.4 Contraception and abortion: selected measures of knowledge, attitudes, and use, by subgroup

Measure	Urban middle	Urban lower	Rural	Female	Male	All respondents
General knowledge and use of contraception						
Mean number of contraceptive methods respondents had heard about	7.1	5.9	4.3	5.4	6.1	5.8
Mean number of contraceptive methods respondents knew how to use	5.5	3.8	2.4	3.3	4.5	3.9
Mean number of contraceptive methods ever used	1.8	1.1	1.0	1.1	1.4	1.2
Percentage of respondents who had ever used a contraceptive method	85	71	58	65	74	70
Percentage of respondents who had not heard of birth control	1	6	22	13	7	10
Mean score on general attitude toward birth control[a]	4.7	4.5	4.5	4.5	4.7	4.6
Mean score on situational attitude toward birth control[b]	5.7	6.0	5.7	5.7	6.1	5.9
Contraceptive methods ever used (percentage of users)						
IUD	49	51	35	42	49	45
Pill	31	24	13	20	26	23
Rhythm	47	14	9	23	24	23
Condom	26	10	6	11	18	14
Tubal ligation	5	2	16	6	9	8
Withdrawal	14	3	1	6	6	6
Diaphragm	6	1	1	1	3	2
Vasectomy	1	2	1	2	1	2
Knowledge of and attitude toward abortion						
Percentage of respondents who had not heard of abortion	3	9	24	17	7	12
Mean score on general attitude toward abortion[a]	2.5	2.3	2.3	2.4	2.4	2.4
Mean score on situational attitude toward abortion[c]	6.0	6.4	6.2	6.4	6.0	6.2

a Mean scores range from 1 (disapprove strongly) to 5 (approve strongly).
b Mean scores range from 1 (disapprove strongly) to 7 (approve strongly).
c Mean scores range from 1 (disapprove strongly) to 9 (approve strongly).

available to all women under age 30 (Keeny and Cernada, 1970). More middle-class than other respondents had also used two other traditional methods, condoms and withdrawal. Condoms were not introduced to the national family planning program until 1970 but had been readily available through the private sector, especially in urban areas, prior to that year. One rather surprising finding is that 16 percent of rural couples had chosen female sterilization at a time when sterilization was not offered by the national program and its legality was still in question, although it was widely available through private medical sources. More rural than urban couples may have elected this permanent method because they had been married longer and had had more time to complete their families. Small percentages of respondents in all three groups had used the diaphragm and vasectomy.

To ascertain attitudes toward contraception, respondents were asked whether they generally approved or disapproved of married couples' using some method of birth control to prevent pregnancy and how strong their approval or disapproval was. They were also asked whether they approved or disapproved of birth control in three specific situations—to delay the birth of the first child, to control the spacing or timing of births after the first child, and to prevent further pregnancies after having all the children wanted. Chinese respondents approved of contraception in general, the middle class and men registering strong approval (scoring 4.7 out of a possible 5). Respondents also approved of contraception in the specific circumstances mentioned, the lower class and men voicing the strongest approval. Such approval is consistent with the government's official policy toward family planning and may be due in some measure to a mass media campaign, launched by the national family planning program in 1968, to encourage small families and spread knowledge about contraception (Keeny and Cernada, 1970).

More than half of the respondents (56 percent) approved of contraception to delay the birth of the first child, despite strong normative pressures against such practice. It is possible that the high rate of approval was due to the fact that three-quarters of the respondents already had at least one son and no longer felt exposed to the pressures. More urban and male respondents approved of contraception in this circumstance than did rural and female respondents. Since a wife's status in her husband's family is largely determined by whether she bears a child, particularly a son, it is not surprising that fewer women than men approved of contraception to postpone initial childbearing. More than four-fifths of the sample approved of contraception to con-

trol the spacing or timing of births after the first child, and 90 percent approved of it to prevent further pregnancies after having all the children wanted. Subgroup differences in the latter two circumstances were similar to those in the first.

Respondents were also asked whether they had heard of abortion and, if so, whether they approved of it in general and in four specific situations—if a doctor said it would be dangerous for the wife to give birth again, the couple could not afford to have another child, the pregnancy would interfere with the wife's work or career, and the pregnancy resulted from rape. Nearly a fourth of the rural respondents, most of them women, had not heard of abortion. It is possible that the term rather than abortion itself was unfamiliar to some of these people. Those familiar with the term expressed rather strong disapproval of abortion in general, although when asked about specific situations in which a woman might seek an abortion all groups voiced quite strong approval. Interestingly, the lower-class and rural groups showed less approval of abortion in general than the middle class but more approval than the middle class of abortion in the circumstances cited. There was no difference between male and female respondents on general attitude, but with reference to specific situations women approved of abortion more strongly than men. Although illegal in Taiwan, abortion is readily available and widely practiced, especially among women who have attained their preferred family size, women over 40, and urban women (Yen et al., 1973:119; Sullivan et al., 1976:237).

To summarize, VOC respondents in Taiwan generally wanted families half the size of the ones from which they came, viewed their own preferred family size as being typical of their communities (though tending, if anything, to be smaller than average), and had already achieved or nearly achieved their family-size objectives. Most of them had borne their first child during the first year or so of marriage but had postponed subsequent births for several years. Most respondents strongly approved of contraception, knew about several methods (particularly those offered in the national family planning program), and were using or had used at least one method to plan their families. Although most did not approve of abortion in the abstract, when asked about specific situations in which a woman might seek an abortion, the majority evinced rather strong approval. As expected, actual, wanted, ideal, and "typical" family size were negatively associated with socioeconomic status, whereas knowledge, approval of, and experience with contraception were positively associated with status. Differences between male and female respondents, however, were

minor. The VOC respondents appear to have been representative in their fertility behavior and attitudes of Taiwanese in their age group.

5

the social context, the value of children, and fertility

The previous two chapters delineated the values respondents in Taiwan attached to children, their knowledge and attitudes concerning birth control, and their family-size desires and actual fertility experience. This chapter examines the relationship between respondents' attitudes toward children and their fertility behavior, and also the influence of respondents' surroundings—the social context—on their childbearing. Although the specialized sample used for this purpose does not permit the correlations discussed here to be generalized to the Taiwanese population at large, the analysis reveals some significant relationships that deserve further investigation.

Using simple correlational analysis, we will first explore the relationship between respondents' reasons for wanting and not wanting more children on one hand, and, on the other, the economic values they associated with children and selected measures of respondents' fertility (both actual and desired). Correlations between the fertility measures and two kinds of variable—economic values of children and selected socio-psychological characteristics of respondents—will also be discussed. Finally, multivariate analysis will be performed in an effort to understand to what extent, if any, respondents were influenced in their childbearing decisions by their socio-demographic background, the economic values and disvalues they ascribed to children, and the psychological values they associated with children.

Correlates of the value of children

For the first set of correlations, we have used five indices of the economic value of children that were derived from responses to both open-ended and structured items in the VOC questionnaire. They and other indices were constructed in cooperation with VOC investigators in other countries to facilitate cross-national comparisons; the composition of the indices is discussed in greater detail in Appendix B of Arnold et al., 1975. The five indices used here have the following components:

1. *Expected economic help from children:* summed scores on six items related to expected economic and practical help from sons and daughters, economic support in old age, and economic help from an additional child.
2. *Decreased utility of children:* a linear combination of responses to questions about the changing economic and practical usefulness of children over time. High scores on this index imply that children had become much less useful economically since the time when respondents were growing up.
3. *Number of children that would be heavy economic burden:* the total number of children that respondents said would be a heavy burden for them to raise. The larger the number, the less was the perceived burden.
4. *Economic burden of wanted family size:* the degree of burden that respondents' wanted number of children entailed. Possible responses ranged from no burden to heavy financial burden.
5. *Economic costs of children:* summed scores on four items related to the perceived economic burden of the number of children wanted, the financial burden of having another child, the financial burden of children's education, and the financial burden of raising children in general.

Table 5.1 shows correlations between these indices and the importance ratings for six reasons for wanting another child and five reasons for not wanting another child that were thought to be of special relevance in Taiwan. Three of the indices—expected economic help from children, economic burden of wanted family size, and economic costs of children—show a strong positive relationship with a number of reasons for both wanting and not wanting another child.

Expected economic help from children correlates significantly with wanting another child to carry on the family name and traditions, to satisfy the spouse, and to have a son (the last being a traditional rationale based, in part, on the economic utility of sons). This index also is positively correlated with three reasons for not wanting another child, which is less easy to explain. As will be shown later, respondents who expected to receive a good deal of economic help from children also tended to have larger families than other respondents and therefore

Table 5.1 Correlations of economic indices of the value of children with selected reasons for wanting and not wanting another child

Importance of reason for wanting or not wanting another child	Index				
	Expected economic help from children	Decreased utility of children	Number of children that would be heavy economic burden	Economic burden of wanted family size	Economic costs of children
WANTING					
To carry on family name and traditions	.31*	−.08†	−.10†	.21*	.13*
Want a boy, another boy	.20*	−.03	.02	.04	.04
Want a girl, another girl	.04	.01	.03	−.04	.04
To have child to help me in my old age	na	.04	−.19*	.28*	.27*
One more person to help family economically	na	−.03	−.21*	.31*	.32*
Spouse wants more children	.21*	.00	−.10†	.11†	.11*
NOT WANTING					
Would be financial burden to family	.25*	.03	−.35*	.36*	na
Would restrict my freedom to do other things I enjoy	.21*	−.06	−.18*	.20*	.32*
Would be a lot of work, bother for me	.25*	.01	−.20*	.17*	.39*
Would not be able to give enough attention, care to other children	.03	.01	−.13*	.06	.19*
Would cause problems, strains between me and spouse	.07	.06	−.09†	.13*	.19*

* Significant at .01 level.

† Significant at .05 level.

na—not applicable because item was included in index.

should be particularly sensitive to the disadvantages of another child. These respondents appear to be caught in a double bind; the traditional economic value they attached to children is in conflict with their childrearing experience, perhaps in part because their children are still too young to make an economic contribution to the family. Another possible explanation for the correlations is that respondents scoring high on this index also had a response "set," tending to assign great importance to many reasons for wanting or not wanting another child. However, the low correlations for some items suggest that this was not so.

Both economic burden of wanted family size and economic costs of children show a significant and positive association with the importance attached to wanting another child to carry on the family name and traditions, for help in old age, to help the family economically, and to satisfy spouse. Here again, the reasons for wanting another child are traditional and economic. The perceived costs and economic burden of wanted family size are likely to be greater among parents who want larger families and are less well off financially, and such persons are also more likely than others to assign importance to traditional and economic reasons for wanting another child. Economic burden of wanted family size and economic costs of children are also significantly and strongly associated with most or all of the reasons for not wanting another child.

All of the significant correlations between number of children that would be a heavy economic burden and reasons for wanting and not wanting another child are negative. Respondents who thought they could raise a large family without its becoming a heavy burden tended to attach less importance than others to all reasons for not wanting another child—in particular, to concern over the financial burden of another child—and to most reasons for wanting another child, especially economic reasons. There may be two distinct effects at work here. Respondents who wanted more children may have discounted the importance of reasons for not wanting more, and also rationalized their ability to raise the number they wanted. Another group of respondents, more affluent, may have considered themselves able to support a large family, but because of their relative affluence they did not assign much importance to traditional, particularly economic, reasons for wanting another child.

Decreased utility of children produced only one, rather weak, correlation of significance. Respondents who thought the economic and practical utility of children had declined in recent years minimized the

importance of wanting another child to carry on the family name and traditions. The lack of significant correlations with the other reasons is probably due to the fact that most respondents had not perceived a change in the utility of children, and therefore the index did not reveal differences among respondents.

Although wanting another child to carry on the family name and traditions is significantly correlated with all of the indices, wanting a boy is significantly correlated with only one—despite the fact that, according to Chinese custom, it is sons rather than children of both sexes who give their family name to the next generation of children. Wanting a girl is not significantly correlated with any of the economic indices, probably because daughters were not viewed by respondents as having a strong economic function.

Correlations were also run between selected reasons for wanting and not wanting another child and various measures related to respondents' fertility, including their knowledge and attitudes about birth control (Table 5.2). In general, the more children—and, in particular, the more sons—respondents had, the less likely were they to place importance on most reasons for wanting another child. The one reason for wanting another child that was important to respondents having a large number of sons was the desire for a girl. As expected, all of the significant correlations between number of living children (and number of living sons) and reasons for not wanting another child were positive; that is, the more children (and sons) respondents had, the more importance they gave to not wanting another child because of the financial burden, the restriction of freedom, and the bother another child would entail.

Not surprisingly, the larger the number of additional children wanted, the stronger was the importance respondents attached to all reasons for wanting another child, in particular to wanting a boy and spouse's desire for more children. Conversely, respondents wanting few or no additional children tended to assign greater importance than others to four of the five reasons for not wanting another child, especially to concern over not being able to give enough care to other children and the financial burden of an additional child.

Fewer significant correlations were found between total number of children wanted and importance attached to reasons for wanting another child, the strongest (positive) correlations being with the two economic motives. The only significant association between total number of children wanted and reasons for not wanting another child is negative: respondents wanting a large number of children were less

Table 5.2 Correlations of selected fertility measures with selected

Importance of reasons for wanting or not wanting another child	Fertility measure: Number of living sons	Number of living children	Number of additional children wanted
WANTING			
To carry on family name and traditions	−.18*	−.09	.22*
Want a boy, another boy	−.41*	−.12*	.27*
Want a girl, another girl	.16*	−.20*	.21*
To have child to help me in my old age	−.09†	−.04	.21*
One more person to help family economically	.05	.06	.13*
Spouse wants more children	−.16*	−.15*	.27*
NOT WANTING			
Would be financial burden to family	.15*	.21*	−.21*
Would restrict my freedom to do other things I enjoy	.15*	.14*	−.15*
Would be a lot of work, bother for me	.09†	.13*	−.19*
Would not be able to give enough attention, care to other children	.07	.12*	−.22*
Would cause problems, strains between me and spouse	.06	.11†	−.07

* Significant at .01 level.

† Significant at .05 level.

concerned than others about not being able to give enough attention to existing children if another were born. This association, however, was not strong.

Ideal number of children produced even fewer significant correlations. Respondents whose ideal number was large tended to want another child for economic help to the family; and those whose ideal number was small emphasized the work and bother of another child, and also the fear that they would not be able to give adequate attention to their other children.

In general, the family planning measures show negative correlations with reasons for wanting another child. Respondents who knew about a number of contraceptive methods, had used contraception, and were generally in favor of birth control and abortion placed significantly

reasons for wanting and not wanting another child

Total number of children wanted	Ideal number of children	Number of contraceptive methods known about	Number of methods known how to use	Number of methods ever used	General attitude toward birth control	General attitude toward abortion
.09†	.08	−.09†	−.24*	−.17*	.01	−.13*
.09†	.06	−.11*	−.17*	−.14*	.05	−.03
−.04	−.01	−.03	−.06	−.11†	.02	−.08†
.12*	.07	−.26*	−.32*	−.19*	−.09†	.07
.16*	.12*	−.27*	−.31*	−.24*	−.11*	−.02
.05	.04	−.05	−.13*	−.20*	−.09†	.06
.03	−.01	−.10†	−.12*	−.04	.11*	−.03
.00	.02	−.15*	−.13*	.01	−.03	.05
−.03	−.09†	−.08†	−.13*	.05	.11†	.02
−.09†	−.10†	−.02	−.03	.12*	.13*	.06
.02	−.04	−.04	.02	.11*	.06	−.02

less importance on most reasons for wanting another child than did respondents whose knowledge of and experience with contraception was less and whose attitudes toward birth control were less favorable. Respondents who were least informed, experienced, and approving with regard to family planning placed the greatest importance on wanting another child for economic reasons or to carry on the family name—reasons associated with the traditional value of son preference. That actual contraceptive use is negatively correlated with all reasons for wanting another child suggests that respondents who did not want another child not only tended to give little weight to arguments in favor of another child, but also had attempted to exercise control over their fertility. The attitudinal measures have fewer significant correlations with reasons for wanting another child than do the measures of knowledge and use of contraception, but all are negative.

Significant correlations between the family planning measures and reasons for not wanting another child are mixed. The more contraceptive methods respondents knew about and knew how to use, the less emphasis they put on not wanting another child because of the financial burden, the restriction of freedom, and the work and bother another child would entail. On the other hand, the more contraceptive methods respondents had actually used, the more they tended to emphasize not wanting another child because it would prevent them from giving enough attention to existing children and create problems between husband and wife. All significant associations between general attitude toward birth control and reasons for not wanting another child are positive: respondents whose attitude was favorable generally stressed the financial burden, the work and bother, and the neglect of other children that an additional child would cause. None of the correlations between general abortion attitude and reasons for not wanting another child is significant.

When economic indices of the value of children were correlated with family-size and family planning variables we found that most of the relationships are significant, that in nearly all cases the indices are positively associated with the family-size measures, and that in most cases they are negatively associated with the family planning measures (Table 5.3). The strongest correlations are between expected economic help from children and the fertility measures. In general, the more economic help respondents expected to receive from their children, the more children (and more sons) they already had, the more children they wanted to have, and the larger was their ideal family size. The same respondents knew about and had used fewer contraceptive methods and had less favorable attitudes toward contraception and abortion than respondents who expected little or no economic help from their children. This finding lends strength to our hypothesis that respondents who viewed children as an economic asset, rather than liability, would be more likely than others to prefer large families and less likely to be interested in controlling their fertility. Of course, the order of causation may be reversed; couples who were unable to control their fertility may have rationalized their large families by emphasizing the economic utility of children.

The number of children that would be a heavy economic burden (which is a measure of the financial ease of raising a large family) is positively associated with respondents' actual and wanted family size, and also positively associated with their knowledge and use of contraception. This suggests either that those who felt they could afford a

Table 5.3 Correlations of economic indices of the value of children with selected fertility measures

Fertility measure	Index				
	Expected economic help from children	Decreased utility of children	Number of children that would be heavy economic burden	Economic burden of wanted family size	Economic costs of children
Number of living sons	.12*	−.07	−.03	.20*	.23*
Number of living children	.18*	−.03	.15*	.36*	.32*
Number of additional children wanted	.12*	−.06	−.04	.03	−.13*
Total number of children wanted	.27*	−.09†	.13*	.43*	.25*
Ideal number of children	.22*	−.10†	.06	.14*	.13*
Number of contraceptive methods known about	−.42*	.18*	.13*	−.23*	−.25*
Number of contraceptive methods known how to use	−.46*	.15*	.18*	−.20*	−.27*
Number of methods ever used	−.31*	.08†	.16*	−.08	−.12*
General attitude toward birth control	−.11*	.08	−.03	−.07	.07
General attitude toward abortion	−.10*	−.12*	−.07	−.12*	−.05

* Significant at .01 level.

† Significant at .05 level.

large family acted on that belief, or that those who had a large family on other grounds rationalized it economically. Looked at from another perspective, the correlations with parity may indicate that those who anticipated heavy costs did restrict their family size. The positive correlation with family planning cannot readily be explained, but may reflect the pressure for limitation among those who already had large families for economic reasons, or it may be explained by an intermediate variable, socioeconomic status. That is, those who thought they could afford more children were more knowledgeable about family planning and had greater access to it.

The economic burden of wanted family size shows a strong positive association with most of the family-size measures and a somewhat weaker negative association with several of the family planning measures. Thus respondents who idealized, had, and wanted large families felt the burden of their wanted family size more keenly than other respondents but were less knowledgeable about available birth control methods. Conversely, respondents who wanted and actually had fewer children felt their wanted number of children to be less of a burden and were better informed. For the 62 percent of the sample whose actual and wanted family size were identical, the economic burden of their wanted family size was not hypothetical but real.

The index of economic costs of children also shows strong positive correlations with most of the family size measures and strong negative correlations with most of the family planning measures. The exception is a negative correlation between this index and number of additional children wanted. Respondents who felt the economic costs of children to be very great wanted fewer additional children than other respondents, but they actually had relatively larger families. Perhaps because they were less educated, the same respondents knew about and had used fewer contraceptive methods than respondents for whom the economic costs of actual and wanted family size were not so great.

This index for decreased utility of children produced the fewest significant correlations with the fertility measures. As expected, respondents who believed that children's economic and practical value to parents had declined in recent years generally wanted and idealized smaller families than respondents who did not share that belief; they also knew about and had used more contraceptive methods than other respondents. An unexpected finding, however, is that the same respondents had a more negative attitude toward abortion than respondents who thought children's economic utility had not decreased. Because abortion is commonly regarded as an immoral act, these respondents may have thought that to approve of it would encourage premarital sexual relations.

In summary, economic considerations appear to be strongly associated with family-size and family planning attitudes of the VOC respondents, although not always in the expected direction. The economic indices generally had the strongest correlations with the family-size measures and the weakest correlations with the attitudinal measures. Multivariate analysis should shed further light on these relationships by controlling for a number of socioeconomic and psychological characteristics of respondents. Before turning to the regression tables,

however, let us look at one more correlation matrix, between the fertility measures and some social and psychological variables not previously discussed.

The VOC questionnaire included questions designed to measure the degree to which respondents were modern or traditional in their value orientation, exposed and susceptible to normative pressures favoring small families, dominant or passive vis à vis the other spouse in decision-making situations, fatalistic or decision-minded concerning their family formation, urbanized, and aware of events outside their immediate community. In the case of wives, we were also interested in knowing whether they had been employed outside the home since marrying and, if so, for how long. Our assumption was that these measures would have some bearing on respondents' reproductive behavior. Scales for the measures were devised as follows:

1. *Modern goods owned.* All respondents were shown a list of 15 consumer durables; in addition, rural respondents were shown a list of five pieces of farm equipment (see Appendix). The more items respondents owned, the higher they scored on this measure.
2. *Pressures toward small family ("small family press").* Respondents whose close friends and relatives used contraception, who perceived a typical family to have few children, who knew any couples not wanting children, and who did not say their relatives wanted them to have more children scored high on this measure.
3. *Small-family press (attitudinal).* Added to the above criteria is disagreement with three attitude items: (11) Considering pressures from family and friends, a person really doesn't have much choice about whether or not to have children, (21) A young couple is not fully accepted in the community until they have children, and (31) The family with children is the basis of everything good in our society. The stronger the small-family pressures respondents perceived, the higher the score on this measure.
4. *Husband's influence in decision making.* Respondents were asked whether the husband or wife usually made decisions regarding the type of job the husband should have, which physician to summon when a child was ill, and whether or not to purchase an important item for the household. The more decisions made by the husband, the higher was the score.
5. *Overall modernity.* A modified version of the overall modernity (OM) scale developed by Smith and Inkeles (1966) was used that included six questions probing respondents' attitudes toward such things as a person's qualifications to hold public office, the value of scientific research, and innovative versus traditional ways of doing things. The highest score represents extreme modernity whereas the lowest score signifies strong tradition.
6. *Media exposure.* Respondents were asked how often they usually got news and information from newspapers and from radio or television. For each

Table 5.4 Correlations of selected fertility measures with selected

Fertility measure	Socio-psychological variable		
	Modern goods owned	Small-family press	Small-family press (attitudinal)
Number of living sons	−.15†	.10†	−.07
Number of living children	−.20*	.11†	−.16*
Number of additional children wanted	.07	−.26*	−.07
Total number of children wanted	−.14†	−.08	−.22*
Ideal number of children	−.30*	−.08†	−.11*
Number of contraceptive methods known about	.37*	.06	.19*
Number of methods known how to use	.35*	.09†	.24*
Number of methods ever used	.18*	.13*	.18*
General attitude toward birth control	−.06	.08†	.12*
General attitude toward abortion	.08	.09†	.12†

* Significant at .01 level.

† Significant at .05 level.

source there were four possible responses—every day, a few times a week, rarely, and never.

7. *Wife's employment history.* This was the number of years the wife had been employed since her marriage.
8. *Fatalism.* Three attitude items were selected for this measure: (11) Considering pressures from family and friends, a person really doesn't have much choice about whether or not to have children, (24) For most people, it is inevitable to have children, and (38) It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have. Respondents expressing strong agreement with these attitudes scored high on the measure.
9. *Decision-mindedness in childbearing.* This index was derived from scores on five attitude items: (9) A couple ought to think seriously about the inconveniences caused by children before they have any; (23) The first thing a couple should think about when deciding to have children is whether or not they can afford it; (32) Before having a child, a couple should consider whether they would rather use their money for something else; (41) Before having a child, a couple should consider whether it would interfere with the wife's work or not; and, reverse scored, (38) It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have.
10. *Urban experience.* This measures the percentage of respondent's life spent in a large town or city.

socio-psychological variables

Husband's influence in decision-making	Overall modernity	Media exposure	Length of wife's employment	Fatalism	Decision-mindedness in child bearing	Urban experience
−.04	−.02	−.18*	.09	.08†	−.05	−.09†
−.08	−.00	−.17*	.06	.15*	−.17*	−.09†
.09†	−.00	−.03	.13†	.03	−.01	−.07
.01	.00	−.17*	−.03	.16*	−.16*	−.15*
.04	−.03	−.20*	.02	.10†	−.15*	−.13*
−.04	.21*	.46*	.03	−.14*	.14*	.39*
−.03	.24*	.41*	.11†	.18*	.08†	.35*
−.05	.14*	.27*	.17*	−.13*	.09†	.23*
−.08	.15*	.11*	−.10	−.15*	.20*	.05
−.01	.08	−.01	.03	−.12*	.08	.02

As anticipated, respondents who scored high on the measures of modernity—in particular, on number of modern goods owned, small-family press, degree of media exposure, decision-mindedness in child-bearing, and length of urban residence—generally scored low on the family-size measures and high on the family planning measures (Table 5.4). Fatalism, in contrast, correlates positively with most of the family-size measures and negatively with most of the family planning measures. Overall modernity correlates strongly and positively with all of the family planning measures except general attitude toward abortion, but unexpectedly shows no significant relationship to any of the family-size measures. Husband's influence in decision-making, which is associated in the expected positive direction with only one fertility measure (number of additional children wanted), proved not to be a very useful variable.

Length of wife's employment is positively correlated with the number of contraceptive methods respondents knew how to use and had actually used; but, somewhat surprisingly, the only family-size measure with which it is significantly correlated is the number of additional children wanted; and the correlation is positive, not negative. This

finding seems to suggest that couples in which the wife had been employed during most of their married life had used contraception to delay births, perhaps in order to allow the wife to keep working, but wanted to make up for those postponed births at a later time. Since most of the employed women in the sample had married later than other women, another explanation is that they had had fewer years of marriage in which to achieve their desired parity.

Most of the socio-psychological variables, however, are significantly related to respondents' reproductive preferences and behavior, and most of the significant correlations are in the predicted direction. If we call "modern" those respondents who owned a number of modern goods, did not seem to be under any pressure to have a large family, were in touch with the media, had considered alternatives to childbearing, had lived in an urban setting for some years, and were not fatalistic, then modern respondents tended to have, want, and idealize smaller families, and to be more experienced with contraceptive techniques than "traditional" respondents.

The analysis presented thus far has been based on the total Taiwan sample. We should note that some of the significant correlations revealed by the analysis reverse their signs or disappear altogether when individual subgroups are analyzed. Furthermore, as we have already mentioned, the direction of causation—if indeed there is causation—cannot be established from correlational analysis alone.

In the following section, we turn to multivariate analysis in an effort to understand better the relationships observed between respondents' family-size preferences and family planning behavior on the one hand and selected socio-psychological characteristics, economic values associated with children, and social and psychological values related to children on the other. Because our sample is small and nonrepresentative of Taiwan's population at large, the analysis is exploratory, a first step in testing the value-of-children model outlined in Chapter 1. Our main purpose is to investigate the potential influence of the value-of-children variables—economic and socio-psychological—on the reproductive behavior of VOC respondents. A second objective is to suggest directions for further research on this topic.

Determinants of fertility attitudes and behavior

For the multivariate analysis we selected three sets of predictor variables (Table 5.5). The first set consists of seven socio-demographic characteristics of respondents that previous studies have shown to exert a strong influence on family size. The remaining two sets com-

prise five economic values of children and 11 socio-psychological values of children, selected because correlational analysis of the VOC data suggested their importance in influencing childbearing behavior. Most of these value-of-children variables have already been discussed, but several require explanation.

First, the variable "economic benefits/large family" results from an open-ended question concerning whether a family is better off or worse off economically with "a lot of children." Responses indicating that a family is better off with more children were given a high score. Second, the cluster of socio-psychological values of children includes nine VOC subscales that were derived from a factor analysis of the VOC attitude items using data from all six countries (2,591 respondents). (See Arnold et al., 1975:49–63, for details of the combined factor analysis.) Several of the subscales are similar to the factors obtained from the Taiwan data alone. For example, *external controls on childbearing* contains two of the three attitude items found in *individualistic versus external orientation toward childbearing* (Taiwan factor VI), and *decision-mindedness in childbearing* contains all three of the items found in *propensity to assess alternatives to childbearing* (Taiwan factor V), plus an additional item. The subscale labeled *costs of children* is similar to Taiwan factor IV, *economic and psychological costs of children,* although fewer attitude items overlap in this case. For the sake of cross-national comparability, the VOC subscales rather than the Taiwan factors are used in this analysis. Finally, the variable labeled "benefits for children in large family" is based on a structured questionnaire item listing seven attributes of children, which range from high intellectual ability to openness and love toward other people. Respondents were asked whether each attribute was characteristic of children from large families or small families. High scores on this variable represent the association of positive attributes with a large family.

Four family-size and three family planning measures were selected as dependent variables. The family-size measures are number of living children (parity), number of additional children wanted, total number of children wanted (a combination of the first two measures), and intensity of son preference. The family planning measures are situational attitude toward birth control,[1] number of contraceptive methods known, and current contraceptive use.

Three sets of multiple regressions were run on each dependent

1 See discussion of Table 4.4 (Chapter 4) for an explanation of this variable.

Table 5.5 Prediction of selected fertility variables as shown by standardized regression coefficients (betas) and proportion of variance explained (R^2)

Predictor variables	Dependent variable: Number of living children	Number of additional children wanted	Total number of children wanted	Intensity of son preference	Situational attitude toward birth control	Number of contraceptive methods known	Current use of contraception
Socio-demographic characteristics							
Parity and pregnancy	na	−.13*	na	na	na	na	na
Age	−.04†	−.03	−.04†	.10*	.05†	.00	−.15*
Income	−.06*	.01	−.04†	−.04†	.04†	.10*	.02
Education	−.06*	.03	−.01	−.11*	−.02	.16*	.11
Urban experience	.07*	−.10*	.03	.05*	.01	.08*	.01
Media exposure	.05*	−.01	.06*	.02	−.03	.20*	.20*
Duration of marriage	.68*	−.15*	.36*	.09*	−.21*	−.03	.39*
R^2 (socio-demographic)	**.52***	**.18***	**.19***	**.15***	**.04***	**.30***	**.20***
Economic values of children							
Expected economic help from children	−.01	.08*	.12*	.09*	−.18*	−.07*	−.05
Financial ease of raising large family	.17*	−.01	.17*	.09*	−.07*	.04†	.05*
Economic benefits/large family	−.01	.06*	.11*	.11*	−.17*	−.21*	−.09*
Decreased utility of children	.03†	−.08*	−.04*	−.03	−.18*	.10*	.02
Economic burden of children's education	.14*	.03	.15*	.11*	−.09*	−.04*	−.07*
R^2 (socio-demographic + economic VOC)	**.55***	**.22***	**.26***	**.21***	**.13***	**.36***	**.23***

Socio-psychological values of children							
Continuity, tradition, security	.04†	−.11*	−.02	.10*	.23*	.00	−.09*
Parenthood satisfactions	−.03†	−.02	−.04†	−.06*	−.03	−.03	.01
Role motivations	−.02	.04†	−.03	.07*	−.08*	−.03	.13*
Happiness, affection	−.01	.06*	.03	.03	.05†	.05*	−.04
Goals, incentives from children	−.01	.02	.02	.05†	−.03	.03	−.07*
Social status from children	.02	.04†	.10*	.10*	−.06*	−.02	−.03
External controls on childbearing	.08*	.02	.08*	.16*	−.12*	.01	.02
Costs of children	.12*	−.05*	.03	−.06*	.10*	.05*	.03
Decision-mindedness in childbearing	.04*	−.05*	−.05*	−.08*	.13*	.06*	−.08
Reasons for wanting another child	na	.30*	na	na	−.11*	−.04†	−.08†
Reasons for not wanting another child	na	.24*	na	na	−.01	−.06*	.12*
Benefits for children in large family	.03†	−.07*	.02	.01	−.10*	−.03†	−.06*
R^2 (socio-demographic + economic VOC + socio-psychological VOC)	.57†	.34*	.28	.27*	.21*	.38*	.28†

na—not applicable.

* Significant at .01 level.

† Significant at .05 level.

variable. The first used the cluster of socio-demographic characteristics as predictors, the second added the economic values of children, and the third added the socio-psychological values of children.[2] The purpose was to learn how much predictive power the economic and socio-psychological values of children added to the proportion of variance explained (R^2) after the socio-demographic characteristics of respondents were accounted for.

As expected, the socio-demographic variables together proved to be rather strong predictors of most of the family-size and family planning variables. The proportion of variance explained by this cluster is highest for number of living children (52 percent) and contraceptive knowledge (30 percent), both reflections of past experience. It is also fairly high (20 percent) for current use of contraception, a measure of current fertility behavior. The only dependent variable on which the cluster shows little influence is situational attitude toward birth control (4 percent).

The addition of the economic VOC cluster to the socio-demographic characteristics increases the R^2 significantly, and by at least 3 percentage points in all cases. The largest increements are for birth control attitude (from 4 to 13 percent) and total number of children wanted (from 19 to 26 percent), both of which may be considered potential indicators of future behavior.

When the socio-psychological VOC cluster is added to the socio-demographic and economic variables, there is a further increase in the proportion of variance explained by the predictors that is significant in all cases but one (total number of children wanted). For most of the dependent variables the amount of the increase is slight but for number of additional children wanted and birth control attitude it is 12 and 8 percentage points respectively. Again, these variables are relevant to future reproductive behavior.

In summary, the socio-demographic variables by themselves demonstrate strong to moderate predictive effects on most of the dependent variables, exerting their greatest influence on current family size, knowledge of contraceptive methods, and current contraceptive practice. The incremental effect of each VOC cluster on the proportion of variance explained is slight to moderate for most of the dependent

2 For the prediction of additional children wanted, parity was added to the cluster of socio-demographic characteristics as a separate predictor. For the prediction of number of living children, total number of children wanted, and intensity of son preference, reasons for wanting and not wanting another child were deleted from the cluster of socio-psychological values of children.

variables; but together they add considerable explanatory power to the socio-demographic variables, and in the case of birth control attitude they account for most of the variance. Besides birth control attitude, the dependent variables most strongly affected by the addition of the value-of-children clusters are intensity of son preference and number of additional children wanted.

Table 5.5 also shows the beta coefficients for the seven dependent fertility variables and the three sets of predictors. Within the socio-demographic cluster duration of marriage is the most important predictor of most family-size variables, attitudes toward birth control, and current contraceptive use. Other things being equal, respondents who had been married longer had much higher parity and wanted larger completed families than other respondents, but also wanted fewer additional children. They tended to have slightly stronger son preferences than others and to be considerably less favorable toward birth control, but—perhaps because of their desire not to have more children—to be practicing contraception at the time of the interview.

Other socio-demographic variables show weaker effects on family size and family planning. With other effects held constant, age has a positive influence on son preference and a negative influence on current contraceptive use. Income and education, as expected, are predictors of somewhat lower parity, smaller wanted family size, weaker son preference, and greater knowledge of contraceptive methods, but they show no significant effect on current contraceptive use. Media exposure is a strong positive predictor of contraceptive knowledge and current use. Urban experience, another "modernizing" variable, has a negative influence on number of additional children wanted and weak but positive effect on number of contraceptive methods known.

All of the economic VOC predictors show significant relationships with most of the family-size and family planning variables. The expectation of receiving economic help from children has a positive influence on total number and additional number of children wanted and on son preference; it also has a slight negative effect on number of contraceptive methods known and a stronger negative effect on attitude toward birth control, but no significant effect on current contraceptive use. Similarly, associating economic benefits with a large family has a positive effect on total number of children wanted and intensity of son preference, and a negative effect on all of the family planning measures. Belief in the financial ease of raising a large family positively influences parity, total number of children wanted, and strength of son preference; it has a negative influence on attitude toward birth control

but a positive influence on contraceptive knowledge and current contraceptive use. In this case it is possible that the direction of causation is reversed—i.e., that respondents who already had high parity did not view their family size as a financial burden. That financial ease of raising a large family does not have a positive influence on the number of additional children wanted and on contraceptive use tends to support this interpretation.

The perception that children's economic and practical utility has declined in recent years led respondents to want fewer additional children and to know about more contraceptive methods; but paradoxically it also had a negative influence on birth control attitude. The cause of this apparent contradiction is not clear. There is no reason to suppose, however, that knowledge about an innovation automatically leads to its adoption. People in Taiwan are being exposed to information about contraception through the national family planning program and as a result of general socioeconomic modernization, but they must still internalize the new values associated with family planning before changing their attitude from disapproval to acceptance.

Economic burden of children's education has a positive relationship with parity, total number of children wanted, and son preference but a negative effect on family planning measures; as with the variable of financial ease of raising a large family, the direction of causation may be reversed. Thus, respondents who already had a large number of children of school age were likely to be more aware of the costs of education than respondents with smaller families.

Among the socio-psychological VOC variables, the subscale of continuity, tradition, and security and reasons for both wanting and not wanting another child demonstrate the strongest explanatory power. Continuity, tradition, and security shows an expected positive influence on intensity of son preference but an unexpected negative influence on number of additional children wanted (with parity controlled). Its strong positive effect on birth control attitude is also unexpected and in apparent conflict with a weaker and negative effect on current contraceptive use. These findings do not lend themselves to easy interpretation. Reasons for wanting another child have a positive predictive effect on number of additional children wanted, as expected; but so do reasons for not wanting another child, which was not expected. On the other hand, the influence of these predictor variables on current contraceptive use is in the expected direction.

Several other betas deserve mention. Social status from children has a moderately strong positive influence on total number of children

wanted and intensity of son preference, a somewhat weaker negative influence on birth control attitude. Costs of children, which has a moderately strong association with number of living children and weaker but negative association with number of additional children wanted, seems to be the dependent rather than the predictor variable. A somewhat surprising finding is that decision-mindedness, though negatively influencing the number of additional children wanted, has no significant effect on current contraceptive use. Perhaps some other consideration such as a distaste for the available methods weakened its potential effect on contraceptive behavior.

The findings from the regression analysis are thus inconclusive. They provide strong support for our hypothesis that reproductive attitudes and behavior are influenced not only by socio-demographic characteristics traditionally considered to be important predictors, but also by economic, social, and psychological values that people attribute to children. Nevertheless, the effects of the value-of-children variables are not always significant or in the direction anticipated. It is possible that some of the measures used were not reliable indicators of the value dimensions they represented and that better measures need to be devised. It is also possible that intervening variables not taken into account were responsible for at least some of the unexpected relationships revealed by the regressions. Because of the small number of respondents in each socioeconomic group, it was necessary to perform the multivariate analysis using the total sample, which, as we have already noted, was not representative of Taiwan's population. Further research incorporating additional variables, other measures of the value-of-children dimensions, and more representative samples of respondents is needed to confirm or refine the tentative findings presented here. An expanded phase of the Value of Children Study addressing these issues is now in progress.

6

summary of findings and policy implications

Historically, Chinese have taken a pronatalist view of family formation, believing the expansion of the family to be a major source of prosperity. The Chinese implanted this cultural tradition in Taiwan, where population growth was also long regarded as the main impetus to development. Not until after World War Two and the withdrawal of the central government to Taipei in 1949, which was accompanied by another stream of migrants from the mainland, did Taiwan begin to experience the problem of too rapid demographic growth.

But until recently political and economic, as well as cultural, considerations prevented the government from formulating a policy aimed at reducing the rate of growth. The government has anticipated reclaiming the Chinese mainland, a challenge that would require a huge military force and afterward a major reconstruction effort. Furthermore, the rapid industrial development that began to take place in the late 1960s enabled the economy to absorb surplus labor from the rural population. Thus it was not until 1968 that the government announced its support of family planning, although an unofficial program had been in operation since 1959.

By 1973 the government had succeeded in reducing the growth rate by one third (from 3 percent in 1963), and by 1975 the rate of natural increase was 1.83 percent. The current goal is to lower the growth rate to 1.69 by 1981. To achieve this objective, contraceptive information and services are provided through the national family planning pro-

gram and various health agencies. Medical authorities have also advocated a liberalized abortion law but thus far without success. The idea of diffusing family planning information through social organizations and voluntary agencies is now under serious consideration by the Population Policy Committee of the Ministry of the Interior.

Much demographic research has been conducted in Taiwan in recent years, particularly KAP (knowledge, attitudes, and practice) surveys, but little attention has been given to the motivational aspects of fertility behavior, especially the social and psychological motivations, such as those explored in the Value of Children Study. The study was undertaken in the belief that a better understanding of the values parents place on children would have practical implications for demographic policy. Perhaps because of the emphasis on the positive values of children in Taiwan culture, many respondents were surprised to be asked about the advantages and disadvantages of having children. However, careful probing by the interviewers revealed a wide array of positive and negative values, which were also shown in responses to structured items in the questionnaire. These findings were examined in detail in the body of this report, with particular emphasis on the different patterns of positive and negative values shown for three socioeconomic groups: urban middle class, urban lower class, and rural. Also analyzed were the relationships between the value of children and a variety of other factors, including fertility and family planning. In the pages that follow, we will cite just a few highlights of these findings, discuss limitations of the study, and suggest some policy implications.

Positive values of children

Children were seen as providing both intrinsic and extrinsic benefits to parents. Chief among intrinsic benefits were the emotional satisfactions such as love, the fun of playing with children, and the companionship they provide. Conversely, children were seen as preventing loneliness and keeping life from being dull. Many respondents emphasized the happiness that children bring to a family. Some stated that children are essential to personal happiness or that a family without a child is incomplete. Also of major importance were certain extrinsic or utilitarian values of children, such as to continue the family name and traditions and provide help to parents in old age. For the total sample, continuing the family name was the most important benefit of children, ranking even above the more frequently mentioned emotional values. Among the subgroups, urban lower-class, rural, and male respondents placed greater emphasis on continuing the family name

and traditions than did women and the urban middle-class group, for whom emotional benefits were more important. Since only sons can continue a family name—daughters take their husbands' family names when they marry—this finding suggests that son preference is still strong among the less affluent parents sampled, an inference supported by other evidence from the survey. Help in old age was valued most by rural respondents and women, somewhat less by the urban lower-class group and men, and hardly at all by the urban middle-class group. Children, of course, are valued helpers in agricultural families and often assume responsibility for running the family farm when their parents are too old to work.

In addition to the advantages children provide directly to their parents, respondents were aware of such indirect satisfactions as the opportunity to instill values in their children and the incentive that having children gives parents to succeed in life. They mentioned not only the pleasure of watching their children's growth and accomplishments, but also that children motivate parents to develop their own character and offer affection to others. These satisfactions are derived from respondents' sense of identity with their children.

Negative values of children

By far the most salient and important disadvantage was the financial cost of rearing children, but emotional and opportunity costs were also prominent. Nearly half of all respondents mentioned the financial burden, and nearly a third ranked it first in importance. This disvalue was felt most keenly by rural respondents and least by the urban middle-class group; as expected, men were also more concerned about it than were women. Few respondents mentioned the costs of education specifically, possibly because their children had not yet reached school age or because education was just one of many expenses they had in mind. With the extension of compulsory education and the growing importance in Taiwan of higher education as a precondition for industrial development, educational costs are likely to be more salient to these parents in the future.

Noise and disorder caused by children ranked second in both frequency of mention and importance. Urban respondents were somewhat more bothered by it than were rural respondents, perhaps because children tend to be more confined to the indoors in an urban setting. Men and women, however, gave it approximately equal weight. Another emotional cost of importance to all socioeconomic groups was health problems of children. Not surprisingly, twice as many

women as men rated this disadvantage as important, since women usually have primary responsibility for child care. Whether this concern reflected a fear of infant mortality is difficult to say.

Other emotional costs were the physical work and fatigue children cause, the general emotional strain of having children around, the responsibilities of parenthood, and problems of raising and disciplining children. More women than men mentioned the physical and emotional strain of childrearing. Urban lower-class respondents were more bothered by the problem of discipline than were the other two socioeconomic groups. A number of them stated that the diffusion of Western values through television had made it more difficult for them to discipline their children.

Many respondents mentioned such opportunity costs as lack of freedom to do as they wished and restrictions on parents' time and careers. Some complained that they sacrificed too much of their own time and pleasure for their children, with little reward. In general, middle-class and female respondents were most sensitive to these costs, the former perhaps because they were more modernized and individualistic than the other socioeconomic groups.

Son and daughter preference

The findings above relate to respondents' perceptions of the positive and negative values of children in general. Although people do attach values to children in the abstract, they also value children in the context of their own family-size and family-composition preferences. One purpose of the VOC survey was to explore values attached to children because of their sex.

The value of a child of a particular sex is determined by a variety of factors, including not only tradition but also such personal considerations as the number of sons or daughters already in a family. Even in a culture where son preference is strong, parents of, say, four boys and only one girl may place a higher value on the girl than on the last-born son.

In Taiwan girls were wanted because they are companions to their mothers and give practical help around the house. Girls were also wanted because of their desirable personality traits and in order to achieve the parents' preferred sex ratio. As expected, the rural and urban lower-class respondents and men placed more emphasis on the utilitarian value of girls and the desire for a particular combination of boys and girls than did the urban middle class and women, whereas the two urban groups and women mentioned the companionship of girls more frequently than the other groups.

Although girls were wanted for both intrinsic and extrinsic reasons, by far the most frequently cited reasons for wanting sons were extrinsic: to continue the family name and to provide help in old age. Other utilitarian reasons were that sons could help run the family business or farm and that they provided financial security to the parents. Some respondents were sensitive to social norms favoring sons, mentioning the wishes of other kin or the need to conform to social expectations. In contrast with girls, boys were not wanted for companionship or because of their personalities. Continuity of family name was the dominant motivation for sons within each socioeconomic group. The rural group and, to a lesser extent, the urban lower-class group also stressed security and practical help expected from sons. Men were more concerned than women about conforming to social norms and kin pressures associated with son preference.

Having a son was important to most Taiwan respondents, over half of whom said they would have at least three girls before they stopped trying to have a boy. Nearly a fifth of the sample said they would continue having daughters until a son was born, whereas only 15 percent said they would stop after having two daughters. Son preference was strongest among the two lower socioeconomic groups.

Reasons for wanting and not wanting more children

Many of the benefits and costs of children already mentioned were also cited as reasons for wanting and not wanting another child. Although son preference figured prominently among the reasons for wanting another child (the desire to continue the family name or traditions, and wanting a boy), respondents also placed importance on emotional values of children, the personal growth they foster, concern about child mortality, and the desire for companions for existing children. The financial burden was the most important reason for not wanting another child, but also important were such personal concerns as the possible neglect of existing children, the work and bother, the emotional strain, and the restriction of respondents' freedom. A substantial proportion (29 percent) of respondents expressed concern about overpopulation as a reason for not wanting another child, although this was not usually mentioned as a general disadvantage of having children; apparently they attributed this problem to large families rather than to childbearing itself. In general, the more children (especially the more sons) respondents had, the less importance they placed on wanting another child. Parents having children of only one sex, however, were more likely than others to want another child, probably in the hope of having a child of the other sex.

Effects of values on fertility behavior

As expected, the values respondents attached to children were related to both family size and family planning behavior. Respondents who expected to receive practical or economic help from their children tended to want larger families than other respondents; they were also more concerned about the costs of childrearing, in part because they were less well off financially but also perhaps because their children were still too young to make an economic contribution to the family. Respondents who stressed economic advantages or family continuity as reasons for wanting another child also were less knowledgeable about family planning and were less approving of contraception.

Several situational factors and socio-psychological characteristics of respondents were found to be associated with reproductive preferences and behavior. Among the factors related to wanting or idealizing a smaller family and having greater experience with contraceptive methods were length of urban residence, ownership of modern goods, exposure to mass media, nonfatalistic attitudes, lack of pressure from significant others to have large families, and "decision-mindedness" in considering alternatives to childbearing. Female employment was positively related to contraceptive use, but appeared to have an effect on spacing, rather than on number of children.

With statistical controls introduced in multivariate analyses, it was found that economic dimensions of the value and cost of children were most clearly and consistently related to family size and family planning measures. For example, expectations of economic help from children and belief in the economic benefits of large families were positively related to family-size preferences and intensity of son preference, while negatively related to birth control knowledge and attitudes. For some measures of economic costs of children the expected opposite relationships were observed, but for other measures results were inconclusive. It is difficult to obtain good measures of the economic costs of children, actual or perceived, and the direction of causal relationships in a cross-sectional study are especially problematic for this variable. Nonetheless, we feel that the salience of economic costs and benefits in childbearing decisions has been clearly indicated, both in our research and in the excellent study by Mueller (1972), which was based on a national sample of the population of Taiwan.

The role of social-psychological dimensions of the value of children is at once more complex and less compelling, based on the measures used in this exploratory study. One reason for the complexity is the overlap between economic and noneconomic dimensions. For example, continuity of family name was shown to be an important social-

psychological influence, but its importance is partly due to the economic significance of sons in the cultural context of Taiwan. Likewise, the measure of "decision-mindedness" includes items that imply economic rationality in decisions, and the attitude measure of "costs of children" incorporates both economic and noneconomic costs. With these factors in mind, it is perhaps not surprising that the cluster of measures labeled "socio-psychological values of children" did not show strong or consistent predictive effects *independent* of the measures of economic values and costs in multivariate analyses. The socio-psychological factors do clearly play a mediating role in fertility decisions, as shown by data presented throughout this volume, but further work is needed to clarify their specific influence.

In general, the results suggest that social-psychological VOC dimensions are more predictive of fertility behavior among the more modernized segments of the population. This seems analogous to Easterlin's (1975) observation that fertility decline in the early stages may be more regulated by environmental factors, whereas in the later stages fertility is more closely related to individual modernity. As people become more modern and more prone to make rational decisions (i.e., to weigh the consequences of alternative actions), then perceptions of the value and cost of children should be more closely linked to fertility behavior.

Limitations and possible extensions of the study

By virtue of its being an exploratory and cross-cultural study, this investigation had several limitations. It relied on a small, statistically nonrepresentative sample of the Taiwan population in order to compare equal numbers of couples from three socioeconomic groups. Only farmers were included in the rural group, whereas the two urban groups comprised various occupations; other occupations might have been represented in the rural sample. The sample was also biased in favor of Fukienese. Other ethnic groups who might have been interviewed were the Hakkanese, the Cantonese, and recent immigrants from the Chinese mainland. Finally, respondents exhibited more modernized attitudes and behavior than is characteristic of the population at large, possibly owing to the relatively young sample interviewed.

Most of the respondents expressed impatience with the length of the interviews. A few of the questions embarrassed respondents, such as one about the number of times the respondent had been married. Some of the other core questions used in all VOC countries proved to be inappropriate in the Taiwan setting, whereas relevant topics were

omitted. Factor analysis of the attitude items developed from pretests in Hawaii, for example, revealed that the items did not sufficiently assess such traditional Chinese values as son preference (in particular, having a son to inherit the family property, to enhance the family's prestige, and to continue the family bloodline as distinct from continuing the family name), the value of a large family as a form of prosperity, the view of a single child as a sign of misfortune, and the norms concerning a daughter-in-law's obligations to her husband's family (especially her obedience to her mother-in-law and bearing her in-laws a child as soon after marrying as possible). Because of these limitations and the small size of the sample, most of the factors derived from the factor analysis of attitude items were not particularly coherent and any interpretations of them must be viewed as highly tentative.

Perhaps because of deficiencies in the design of the study, some of the findings have not readily lent themselves to interpretation, and others suggest hypotheses requiring additional research. For example, rural respondents reported longer intervals between first and second births, and between second and third births, than the urban groups, contrary to our expectation. A plausible explanation is that, unlike urban women, rural women usually breastfeed their infants, and lactation is known to inhibit conception. But this hypothesis needs to be tested, for social rather than biological factors may be responsible. One of the purposes of the study, however, was to uncover areas needing further investigation.

In designing the second phase of the VOC Study, an effort has been made to adopt a more cultural-specific framework that will permit more meaningful responses from those interviewed, and consequently more systematic analysis. The second phase has also used a larger and statistically representative sample of the Taiwan population. It is hoped that results of that survey, now being analyzed, will lead to greater understanding of childbearing motivations of Taiwan couples, will identify possible substitutes for values now associated exclusively with children, and will suggest additional strategies for changing values that foster high fertility.

In future analyses, it would be useful also to analyze extrinsic-intrinsic dimensions of the value of children in relation to different contexts, such as levels of socioeconomic development or availability of environmental resources. It may be, for example, that extrinsic values are particularly resistant to change in the absence of changes in the social system or technological development. Specifically, such changes as farm mechanization or government social security systems may be

needed to influence the instrumental value of children. Intrinsic values, on the other hand, may best be altered through educational experiences. An examination of such issues, especially through longitudinal studies or controlled experiments, would be of great practical use.

Another subject needing further investigation is the parental role in Taiwan, because fertility values and behavior are deeply rooted in the family structure (Freedman and Takeshita, 1969:358–359). Of particular interest are changes in the parental role at different stages of the adult life cycle and their relation to childbearing motivation. The second phase of the VOC Study includes respondents of various ages and with varied experience in adult roles (nonparental, as well as parental).

One methodological limitation of the sampling frame used in Taiwan is that the criteria used to differentiate socioeconomic groups did not include income per se. The association between income and fertility thus was not sufficiently explored. Wrong (1967:75) has pointed out that the "pattern of negative correlation between wealth and fertility is much less regular than that between occupational rank and fertility" and suggests that the relation between income and fertility *within* homogeneous occupational classes be explored.

The present study analyzed contraceptive use by summing all methods ever used by respondents. Thus respondents who had used the largest number of methods received the highest scores on this index. But because of differences in effectiveness of the various methods, the index did not necessarily reveal which respondents were likely to be the best contraceptors. A couple who initially chose an effective method and continued to use it may have been more successful at family planning than another couple who tried a variety of methods that did not satisfy them. A better measure of contraceptive success might be duration of use, especially of the more effective methods, but such an index could not be constructed from the VOC questionnaire.

Implications of findings for public policy

Social and economic policies aimed at reducing fertility may either maximize negative values of children or alter or find substitutes for positive values through programs of planned change, such as education, and other modernization measures. Since the goal of the Taiwan government is not to prevent couples from having children, but rather to reduce average family size, its population policy should be designed

to eliminate rewards and increase costs associated with high fertility, while permitting couples to act within a context of choice. For example, legislation removing tax exemptions and increasing delivery expenses for higher-order births would be likely to have a dampening effect on fertility by making couples directly bear the costs of having a family size deemed harmful to the society at large; but it would not prohibit them from choosing the larger family. In a democratic society couples must still have the right to make this choice.

The VOC findings suggest a number of ways in which policy might be instrumental in bringing about a reduction in the population growth rate of Taiwan. The recommendations made below are posited on three assumptions: that couples have a freedom of choice concerning childbearing, that they are likely to make rational choices after weighing costs and benefits of alternative actions, and that their choices are subject to change as either their awareness of the costs and benefits or the actual costs and benefits change.

1. VOC respondents stressed such intrinsic values of children as the happiness and love they bring to parents and the fact that children prevent loneliness. As these values are deeply felt by most human beings, we can hardly change or eliminate them. Instead, it may be desirable to emphasize the advantage of having a small family in order to maximize these values. Parents can interact more intimately with fewer children and reduce many of the childrearing problems mentioned by respondents—emotional strain, concern over the children's health, disagreement between spouses, for example. In other words, educational programs might communicate the economic concept of marginal return and its application to childbearing. The Chinese proverb that children are a sign of blessing on a marriage should be qualified: "but too many children bring unhappiness."

Substitutes can be found for some of the personal growth and pleasure associated with childrearing, and for social as well as demographic reasons one goal of public policy might be to make these substitutes available to more adults. Taiwan is currently undergoing accelerated industrialization and urbanization, and in the midst of this modernization process parents are losing their traditional authority within the family. Moreover, because people are living longer and retiring earlier, they will have a longer period of leisure time than used to be the case. Activities to be encouraged for parents whose children are becoming independent include adult education, discussion groups, touring, and other activities outside of the home.

2. Having sons and its related value, continuing the family name,

were important to all three socioeconomic groups canvassed in the VOC Study. This finding was not surprising, for son preference in traditional Chinese culture is so strong that many parents exceed their desired family size in order to have a requisite number of sons. Sons serve a variety of extrinsic functions besides keeping the family or clan name alive: perpetuating the bloodline, providing a means to transfer family property from one generation to the next, having an appropriate family member worship one's ancestors and oneself after death, bringing status and power to the family, and providing security to the family, especially to its female members. Thus efforts to weaken this value must take into account the different functions of sons.

Several measures suggest themselves. First is a change in the inheritance laws to assure sexual equality in the inheritance of property. If daughters were entitled to an equal share of their parents' property, their economic dependence would be reduced. Second, religious rituals should be reformed to allow female descendants to worship their ancestors and deceased parents, or to eliminate ancestor worship altogether from the present "compound religion" system. Third, public education might advocate small families and the nuclear family system in order to weaken pressures from relatives to have sons for purposes of family power, status, and security.

3. Another important extrinsic value of children, especially for the lower-class respondents, was their economic utility. At the same time, the lower class was more concerned than the other socioeconomic groups about the economic costs of childrearing. These parents may have continued to expect economic benefits from their children even while experiencing the costs, because they viewed the expense of childrearing as a short-term sacrifice having a long-term payoff. The following measures might be adopted to reduce the economic rationale for having large numbers of children: (1) establish an old-age security system, to reduce the necessity of relying on one's children in old age; (2) strengthen various social welfare programs, to protect poor and aged people from destitution due to illness and other misfortunes; and (3) further encourage industrial modernization, to reduce the need for parents to rely on their children for labor. Farmers in particular would not have to depend on their children for farm labor if their farms were more mechanized.

4. We have suggested that substitutes be found for the positive economic values attached to children, especially for rural and lower-class parents. Another approach is to make prospective parents more aware of the economic costs that children entail. VOC respondents cited the

financial cost of childrearing as the major disadvantage of having children, but most of them did not have a clear idea of how much money they spent on their children. Rural respondents in particular tended to discount the cost of food and housing for their children because these items did not require cash outputs. Realistic estimates of the costs of raising a child to specific ages, including sending a child to college, should be brought to the public's attention through the national family planning program and the mass media. Since middle-class parents generally have higher educational aspirations for their children and expect fewer economic rewards than lower-class parents, this "cost approach" seems more appropriate for them, as compared with the "reduced benefits" approach recommended above for the lower economic group.

5. It was noted earlier that education may be especially effective in relation to intrinsic values of children. Among other effects, education increases awareness of modern life styles that may compete with childbearing; i.e., it facilitates consideration of alternatives to parenthood or large families. This educational effect is probably most important for women. It should be noted too that increasing the years of schooling increases the costs of children and reduces their short-term economic value by making them unavailable for family labor. Lengthening the period of mandatory school attendance and encouraging higher levels of education for females would undoubtedly have significant long-term effects on the value of children and fertility in Taiwan.

6. The VOC data revealed a higher rate of premarital pregnancy among urban lower-class and rural respondents than among the middle class, probably owing in part to their more limited knowledge about contraception. Because the subject of sex has generally been taboo in traditional Chinese families, sex education including information about modern contraceptive methods needs to become part of the regular high school curriculum, either as an independent course or as part of existing courses in health and biology. The broader subject of population education should be integrated into such courses as geography, history, and public affairs. To facilitate the teaching of population topics, the Ministry of Education should arrange for high school teachers to receive in-service instruction in basic demography and population issues, including information about the value and cost of children.

7. As suggested at the beginning of this section, a national policy of fertility reduction can heighten people's awareness of the costs of children and it can also increase those costs—or, more accurately, transfer

fertility-related costs from the public domain to the individual parents. The government of Taiwan currently provides various subsidies to public service workers, the amount of the subsidy increasing with each additional child. The subsidies include free housing, free rice, tax exemptions, and children's educational expenses. These measures were enacted out of a recognition of the need for improved living levels, but their effect has been pronatalist. One corrective step the government could take is to eliminate subsidies for couples who exceed a specified parity, after an appropriate warning period, and to provide more public housing for couples with small families. If this policy does not have the desired effect, the government could actually increase child-related expenses (for example, delivery costs) for high-order births. Of course, such policies should be accompanied by the ready availability of safe and effective methods of contraception and, preferably, by access to legal abortion, especially for those who experience contraceptive failure.

8. Among VOC respondents media exposure was positively associated with family planning practice and negatively associated with family size. Television seems to be an efficient means for communicating information and education about population and family planning, for it is highly popular in Taiwan. As per capita income increases with modernization, more families will be able to afford television sets. Population education for adults through television should be given high priority.

Policy and planning are of course only one avenue of social change. Social change can also be induced by such "spontaneous" events as industrialization and urbanization. There is ample evidence that the process of modernization now occurring in Taiwan and other developing countries itself leads to lower fertility, by causing changes in family structure and values. Yet governmental policies can reduce the dislocations caused by rapid social change and facilitate a desired demographic response. Over the long run, education would appear to be the key to modifying intrinsic values associated with children, whereas social legislation and modernization are probably more effective in altering the extrinsic values.

appendix

Appendix Country-specific questions used in Taiwan

(The following list of animal years in the lunar calendar was shown to respondents when they were asked about their own ages and the ages of their children. The questions about age were S4 and S5 of the screening questionnaire, and 1 of the interview proper; they are reproduced in Appendix A of Arnold et al., 1975, pp. 162 and 163.)

Rat	Horse
Ox	Goat
Tiger	Monkey
Hare	Cock
Dragon (Example: 1976)	Dog
Serpent (Example: 1977)	Boar

Religion and religiosity

129.1 What is your religion?
1 ☐ Traditional folk religion
2 ☐ Catholicism
3 ☐ Protestantism
4 ☐ Other
5 ☐ No religious faith

129.2 What is your opinion about the belief that there will be no peace without God's (gods') blessings?
1 ☐ Agree strongly
2 ☐ Agree a little
3 ☐ Disagree
4 ☐ Disagree strongly

129.3 Do you often take part in the activities of a temple (church)?
1 ☐ Participate in almost every activity
2 ☐ Very often
3 ☐ Only on special festivals
4 ☐ Never

129.4 Do you pray to God (gods) when you have problems?
1 ☐ Always
2 ☐ Very often
3 ☐ Sometimes
4 ☐ Never

129.5 Do you often take your children to church (rituals for the worship of God or gods)?
1 ☐ Always
2 ☐ Very often
3 ☐ Sometimes
4 ☐ Never

129.6 Do you think that it is important to worship God (gods)?
1 ☐ Very important
2 ☐ Important
3 ☐ Not very important
4 ☐ Not important at all

129.7 Do you believe that the sex of your children is decided by fate?
1 ☐ Believe strongly
2 ☐ Believe a little
3 ☐ Disbelieve
4 ☐ Disbelieve strongly

129.8 Some people believe that fortune-telling or divining is a kind of superstition. What is your opinion about that?
1 ☐ Agree strongly
2 ☐ Agree a little
3 ☐ Disagree
4 ☐ Disagree strongly

129.9 Do you believe that your ancestors will bless their descendants?
1 ☐ Believe strongly
2 ☐ Believe a little
3 ☐ Disbelieve
4 ☐ Disbelieve strongly

129.10 How often does your family worship your ancestors?
1 ☐ Every day, by burning joss sticks
2 ☐ On the first and the fifteenth day of every month
3 ☐ On some special festivals
4 ☐ Only during the Chinese New Year

129.11 Do you believe that ancestors' geomancy will influence their descendants' success?
1 ☐ Believe strongly
2 ☐ Believe a little
3 ☐ Disbelieve
4 ☐ Disbelieve strongly

129.12 Do you believe that it is a dishonor to one's ancestors not to have any children?
1 ☐ Believe strongly
2 ☐ Believe a little

3 ☐ Disbelieve
4 ☐ Disbelieve strongly

129.13 Do you believe that a person's virtues will bless his descendants after his death?
1 ☐ Believe strongly
2 ☐ Believe a little
3 ☐ Disbelieve
4 ☐ Disbelieve strongly

Family economic status

(161–162 for husbands only; for wives, go to 164.)

161 Do you have in this household any of the following items?

161.1 Household items:

1 ☐ Newspapers	9☐ Radio
2 ☐ Gas stove	10☐ Automobile
3 ☐ Motorcycle	11☐ Television set
4 ☐ Refrigerator	12☐ Sewing machine
5 ☐ Record player	13☐ Washing machine
6 ☐ Automatic rice cooker	14☐ Camera
7 ☐ Air conditioner	15☐ Telephone
8 ☐ Electric iron	

161.1 Farm machinery *(for rural husbands only)*
1 ☐ Power tiller
2 ☐ Power sprayer
3 ☐ Hand sprayer
4 ☐ Rice thresher
5 ☐ Hand-pushed rice transplanter

Rural socioeconomic status

(163 for rural husbands only; for other respondents, go to 164.)

163.1(1) What is the size of your paddy field, in hectares? _____

163.1(2) What is the size of your orchard, in hectares? _____

163.1(3) What is the size of your forest, in hectares? _____

163.2 About how much income did you earn from your crops during the past year? _____ (NT$).

163.3 About how much income did you earn from your livestock during the past year? _____ (NT$).

163.4 About how much income did you earn from other sources during the past year? _____ (NT$).

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